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and said at least one first control signal, further comprising the step of controlling said switch to communicate at least one of said first instruct signal and said at least one first control signal from one of a plurality of instruct signal sources.

314. (Amended) The method of claim 302, wherein a controller controls a switch to communicate to said transmitter one of a mass medium [program] programming and said at least one first control signal, further comprising the step of controlling said switch to communicate at least one of said first instruct signal and said at least one first control signal to one of a plurality of transmitters.

315. (Amended) The method of claim 302, further comprising the step of transmitting to at least one of said plurality of receiver stations at least one datum that specifies one of the title of and subject matter contained in a mass medium [program] programming associated with said first instruct signal.

316. (Unchanged) The method of claim 302, further comprising the step of transmitting to at least one of said plurality of receiver stations a second control signal to cause said receiver station to tune to one of a broadcast and a cablecast transmission containing a specific instruct signal.

## II. REMARKS

### A. Introduction

Applicants have carefully reviewed the Office Action originally issued on March 30, 2000 and have made the foregoing amendments in response thereto.



**1. Claim Accounting**

Claims 6-10, 21, 30-34, 45, 54, 57, 59, 61-62, 65-66, 70-73, 76, 80-84, 87-90, 94-98, 100, 104, 110, 114, 116-124, 130, 136-139, 141-142, 144-146, 158-159, 165-166, 172, 185, 189, 194, 200-201, 215-218, 220, 222-223, 225-226, 229-231, 234-247, 249, 254, 258, 262-266, 272, 278, 280, 284, 286-293, 302-305 & 307-315 are amended. Claims 6-316 are pending in the application. Applicants present no new matter in the foregoing amendments. Applicants respectfully request approval and entry of this amendment.

**2. Summary of Office Action Rejections**

The Office Action mailed on March 30, 2000 only rejects claims 6-235. However, Applicants' have added claims 236-316 in an amendment on May 9, 2000 in consonance with Applicants' agreement with the PTO to consolidate certain of Applicants' co-pending applications. Therefore, this response considers the rejection of claims 6-235 to apply to all currently pending claims 6-316.

The following summarizes the objections and rejections of the March 30, 2000 Office Action with respect to its corresponding paragraph numbers:

Paragraph 3. Claims 6-316 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Paragraph 4. Claims 6-316 that are directed to digital related processes and apparatus, are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Paragraph 5. Claims 6-316 that are directed to data, datum, and indicia and related processes and apparatus, are rejected under 35 U.S.C. § 112, first paragraph, as

containing subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Paragraph 6. Claims 6-316 are rejected under 35 U.S.C. § 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed.

Paragraph 8. Claims 6-316 are rejected under 35 U.S.C. § 112, second paragraph, as failing to set forth the subject matter which Applicants regard as their invention.

Paragraph 9. Claims 6-316 using the terms having different descriptions from Applicants' 1987 specification and 1981 priority application, are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as their invention.

Paragraph 10. Claims 6-316 using the terms, *inter alia*, 'program' and 'programming' are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as their invention.

Paragraph 12. Claims 6-316 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Applicants' U.S. Pat. Nos. 4,694,490 and 4,704,725.

Paragraph 14. Claims 6-316 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants WO 89/02682.

Paragraph 15. Claims 6-316 that are directed to processes of controlling cable head end processes and monitoring of those processes and combined medium presentation, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Greenberg, U.S. Pat. No. 4,547,804 in view of Galumbeck et al., U.S. Pat. No. 4,725,886.

Paragraph 16. Claims 6-316 that are directed to, *inter alia*, processes of controlling broadcast subscriber stations, including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation, are

rejected under 35 U.S.C. § 103(a) as being unpatentable over Jeffers et al., U.S. Pat. No. 4,739,510.

Paragraph 17. Claims 6-316 that are directed to, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hazelwood et al., U.S. Pat. No. 4,025,851 in view of the publication "System and Apparatus for Automatic Monitoring Control of Broadcast Circuits" by Yaname et al. and Hetrich, Australian Patent No. 74,619.

Paragraph 18. Claims 6-316 that are directed to, *inter alia*, processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes, are rejected under 35 U.S.C. § 103(a) as being unpatentable over either one of the common subject matter suggested by Campbell et al., (WO 81/02961, abandoned parent application no. 135,987, and U.S. Pat. No. 4,536,791), in view of at least one or more of: Breeze "Television Line 21 Encoded Information and It's Impact on Receiver Station Design"; Schnee, U.S. Pat. No. 4,290,142; and Zaboklicki, DE 2,904,891.

Paragraph 19. Claims 6-316 that are directed to, *inter alia*, either processes of controlling affiliate stations and processes and monitoring of those processes and combined medium presentation or processes of controlling subscriber stations and method and process for monitoring and providing combined medium presentations, that fall out each particular determining group members of the group of claims described in rejection above, the groups are rejected further in view of one or more of: Hazelwood et al., Yaname et al., Hetrich, Marsden, Young et al., "Journal of SMPTE" Oct. 1971, U.S. Pat. No. 3,761,888 to Flynn, U.S. Pat. No. 3,627,914 to Davis, Tunmann et al., U.K. Pat. No. 959,374 to Germany, Byloff, Chiddix, Skilton, Schiller et al., Zettl, Vikene, U.S. Pat. No. 4,547,804 to Greenberg, Jeffers et al., Diederich, Campbell et al. (WO 81/02961, abandoned U.S. application no. 135,987, and U.S. Pat. No. 4,536,791), Kazama et al.,

Gosch, Stern, Breeze, Barlow, Millar, U.S. Pat. No. 4,725,886 to Galumbeck et al.,  
“CBS/CCETT North American Broadcast Teletext Specification,” Zaboklicki, U.S. Pat.  
No. 4,064,490 to Nagel, U.S. Pat. No. 4,251,691 to Kakihara, Hedger et al., Anderson,  
Gunn, Gaucher, U.S. Pat. No. 4,290,142 to Schnee et al.

Paragraphs 20-21. All claims are subject by the Office to an administrative  
requirement based on the nonstatutory double patenting rejection based on a judicially  
created doctrine preventing the unjustified or improper timewise extension of the “right to  
exclude” granted by a patent and to prevent possible harassment by multiple assignees.

Paragraph 23. All pending claims are rejected under the judicially created  
doctrine of obviousness-type double patenting as being unpatentable over at least one or  
more of Applicants’ issued patents, U.S. Pat. Nos.: 4,694,490; 4,704,725; 4,965,825;  
5,109,414; 5,233,654; and 5,335,277, in view of at least one or more of: Marsden, Young  
et al., Flynn, Davis, Tunmann et al., Germany, Chiddix, Skilton, Schiller et al., Zettl,  
Vikene, Greenberg, Jeffers et al., Diederich, Campbell et al., Kazama et al., Gosch, Stern,  
Breeze, Barlow, Millar, Galumbeck, CBS/CETT North American Broadcast Teletext  
Specification,” Zaboklicki, Nagel, Kakihara, Hedger et al., Anderson, Gunn, Gaucher,  
and Schnee et al.

Paragraph 24. Rejects Applicants’ basis for amending the typographical errors in  
the instant specification in two places on page 37.

Paragraph 25. The oath or declaration is defective under 37 C.F.R. § 1.67(a).

#### **B. Summary of Claim Amendments**

Claims 6-10, 21, 30-34, 45, 54, 57, 59, 61-62, 65-66, 70-73, 76, 80-84, 87-90, 94-  
98, 100, 104, 110, 114, 116-124, 130, 136-139, 141-142, 144-146, 158-159, 165-166,  
172, 185, 189, 194, 200-201, 215-218, 220, 222-223, 225-226, 229-231, 234-247, 249,  
254, 258, 262-266, 272, 278, 280, 284, 286-293, 302-305 & 307-315 are amended.

Claim 6 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 7 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 8 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 9 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 10 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 21 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 30 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 31 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 32 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 33 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 34 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 45 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 54 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 57 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 59 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 61 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 62 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 65 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 66 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 70 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 71 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 72 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 73 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 76 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 80 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 81 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 82 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 83 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 84 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 87 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 88 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 89 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 90 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 94 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 95 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 96 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 97 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 98 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 100 has been amended to correct a typographical error.

Claim 104 has been amended to correct a typographical error.

Claim 110 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 114 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 116 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 117 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 118 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 119 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 120 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 121 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 122 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 123 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 124 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 130 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 136 has been amended to further clarify the claim language in view of Applicants' disclosure.



Claim 137 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 138 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 139 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 141 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 142 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 144 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 145 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 146 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 158 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 159 has been amended to correct an antecedent basis problem.

Claim 165 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 166 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 172 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 185 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 189 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 194 has been amended to correct an antecedent basis problem.

Claim 200 has been amended to correct an antecedent basis problem.

Claim 201 has been amended to correct an antecedent basis problem.

Claim 215 has been amended to change the formatting.

Claim 216 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 217 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 218 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 220 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 222 has been amended to correct an antecedent basis problem.

Claim 223 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 225 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 226 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 229 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 230 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 231 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 234 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 235 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 236 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 237 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 238 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 239 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 240 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 241 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 242 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 243 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 244 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 245 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 246 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 247 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 249 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 254 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 258 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 262 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 263 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 264 has been amended to change the claim dependency.

Claim 265 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 266 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 272 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 278 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 280 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 284 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 286 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 287 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 288 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 289 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 290 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 291 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 292 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 293 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 302 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 303 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 304 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 305 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 307 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 308 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 309 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 310 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 311 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 312 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 313 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 314 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 315 has been amended to further clarify the claim language in view of Applicants' disclosure.

**C. Statement of Patentable Novelty under 37 C.F.R. § 1.111**

Applicants submit that the independent claims as amended include the following limitations that are not found in the prior art. These limitations show patentable novelty in view of the state of the art disclosed by the references cited and the objections made.

**Claim 6:**

storing a timing signal and viewer interest identification data specifying a plurality of different viewer interests;

controlling said computer a first time based on a comparison of said timing signal or said viewer interest identification data to other data, said first step of controlling comprising:

(1) inputting into said computer further data designating a viewer interest of said plurality of different viewer interests or a time;

(2) selecting a plurality of signals, each selected signal including data, mass medium programming, or a control signal respecting said viewer interest; and

(3) storing each selected signal at a storage location;

controlling said computer a second time based on said comparison, said second step of controlling comprising:

(1) selecting one or more computer programming instructions;

(2) generating mass medium programming presentation information content in respect to a second viewer interest of said plurality of different viewer interests; and

(3) preparing to communicate said generated mass medium programming presentation information content upon instruction;

controlling said computer a third time based on said timing signal or said comparison, said third step of controlling comprising:

(1) selecting a portion of said mass medium programming presentation information content;

(2) selecting a location; and

(3) communicating said selected mass medium programming presentation information content to said selected location; and

presenting to a subscriber at a controlled time said mass medium programming with said generated mass medium programming presentation information content, with said mass medium programming and said generated mass medium programming presentation information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.

**Claim 7:**

storing a timing signal and a plurality of identification signals specifying different viewer interests;

controlling said computer a plurality of times, each time based on a comparison of said timing signal or identification signals to other data, said first step of controlling comprising each time:

(1) inputting further data designating a viewer interest of said different viewer interests or a time;

(2) selecting a signal, each selected signal including data, information content, or a control signal respecting mass medium programming; and

(3) storing each selected signal at a storage location, a portion of said selected stored signals designating said different viewer interests; controlling said computer based on said comparison, said second step of

controlling comprising:

(1) selecting one or more computer programming instructions;

(2) generating mass medium programming presentation information content with respect to a second viewer interest; and

(3) preparing to communicate said generated mass medium programming presentation information content upon instruction;

controlling said computer based on said timing signal or said comparison, said third step of controlling comprising:

(1) selecting a portion of said mass medium programming presentation information content;

(2) selecting a location; and

(3) communicating said selected mass medium programming presentation information content to said selected location; and

presenting to a subscriber at a controlled time said mass medium programming with said generated mass medium programming presentation information content, with



said mass medium programming and said generated mass medium programming presentation information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.

**Claim 8:**

storing a timing signal and identification data, each identification datum specifying a plurality of different viewer interests;

controlling said computer a first time based on a comparison of said timing signal or identification data to other data, said first step of controlling comprising:

(1) inputting to said computer data designating a viewer interest of said plurality of different viewer interests or a time;

(2) selecting a first signal, each selected first signal including data, information content, or a control signal respecting a mass medium programming presentation; and

(3) storing each selected first signal at a storage location;

controlling said computer a second time based on said comparison, said second step of controlling comprising:

(1) inputting data designating a second viewer interest of said plurality of different viewer interests or a time;

(2) selecting a second signal, each selected second signal including information content or a control signal respecting a mass medium programming presentation; and

(3) communicating each selected second signal to a processor and a storage location;

controlling said computer a third time based on said comparison, said third step of controlling comprising:

- (1) inputting data designating a third viewer interest or a time;
- (2) selecting a third signal, each selected third signal including one of mass medium programming presentation information content and a control signal; and
- (3) communicating each selected third signal to one of a processor and an output device;

presenting to a subscriber said mass medium programming with said mass medium programming presentation information content, with said mass medium programming and said mass medium programming presentation information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.

**Claim 9:**

storing a timing signal and signal identification data designating a specific signal kind;

controlling said receiver station a first time based on said step of storing, said first step of controlling comprising:

- (1) selecting a first signal, each selected first signal including data in respect of mass medium programming presentation; and

inputting each selected first signal to said programmable apparatus in order to program said programmable apparatus to respond to a specific signal kind;

controlling said receiver station a second time based on said step of storing, said second step of controlling comprising:

- (1) selecting a second signal, each selected second signal including an information content portion and a control portion respecting a mass medium programming presentation; and
- (2) communicating at least said control portion of each selected second signal to said programmable apparatus;

controlling said receiver station a third time based on said step of storing said third step of controlling comprising:

- (1) identifying a third signal, each identified third signal being of a mass medium programming a signal kind; and
- (2) communicating each identified third signal to one of said one or more output devices;

controlling said receiver a fourth time based on said step of storing, said fourth step of controlling comprising:

- (1) communicating to said programmable apparatus a fourth signal, each communicated fourth signal being of a kind other than a mass medium programming signal; and
- (2) communicating mass medium programming presentation information content to one of said one or more output devices in response to each communicated fourth signal; and

presenting to a subscriber a mass medium programming with said mass medium programming presentation information content, with said mass medium programming and said mass medium programming presentation content information content being outputted to said subscriber either as a combined or sequential presentation at said one of said one or more output devices.

**Claim 10:**

storing a timing signal and a plurality of a first data, each first datum designating a different type of signal;

controlling said computer one or more times based on a comparison, said first step of controlling comprising:

(1) selecting a first signal, each selected first signal including data, information content, or a control signal respecting a mass medium programming presentation; and

(2) storing each selected first signal at a storage location;  
controlling said computer based on said comparison, said second step of controlling comprising:

(1) selecting a second signal, each selected second signal including information content or a control signal respecting a mass medium programming presentation; and

(2) communicating each selected second signal to a processor or an output device;

controlling said computer based on said comparison, said third step of controlling comprising:

(1) identifying a third signal, each identified third signal being a control signal designating a signal type; and

(2) communicating each identified third signal to a processor or an output device;

controlling said computer based on said comparison, said fourth step of controlling comprising:

(1) selecting a first signal or a timing signal; and

(2) generating or communicating some mass medium programming information content in response to a control signal; and

presenting to a subscriber a mass medium programming with said mass medium programming information content, with said mass medium programming and said mass medium programming information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.

**Claim 11:**

storing data at said remote data source;  
receiving at said remote data source a query from said receiver station;  
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing some of said transmitted data;  
transmitting from a second remote source to said receiver station a signal which controls said receiver station to select and process an instruct signal which is effective at said receiver station to coordinate presentation of said data with a separate predetermined presentation sequence.

**Claim 12:**

inputting a viewer's or participant's reaction at a subscriber station;  
receiving at said subscriber station information that designates an instruct signal to process or an output to deliver in consequence of subscriber input;  
determining the presence of said subscriber input at said subscriber station by processing said viewer's or participant's reaction;  
processing an instruct signal which is effective to coordinate presentation of data with a separate predetermined presentation sequence at said subscriber station in consequence of said step of determining; and  
transferring from said subscriber station to one or more remote data collection stations an indication confirming delivery of said instruct signal based on said step of processing or confirming delivery.

**Claim 16:**

- (1) receiving said data to be transmitted by the remote intermediate transmitter station and delivering said data to a data transmitter, said data comprising an instruct signal which is effective at the receiver station to coordinate presentation of said data with a separate predetermined presentation sequence;
- (2) receiving said one or more control signals which at the remote intermediate transmitter station operate to control the communication of said data; and
- (3) transmitting said one or more control signals from said data transmitter before a specific time.

**Claim 19:**

detecting the presence or absence of a broadcast or cablecast control signal;  
inputting an instruct-to-react signal to a processor based on said step of detecting;  
controlling said processor to output specific information in response to said step of inputting; and  
coordinating presentation of data with a separate predetermined presentation sequence based on information received from said processor based on said step of controlling.

**Claim 23:**

receiving a broadcast or cablecast transmission;  
demodulating said broadcast or cablecast transmission to detect an information transmission therein, said information transmission comprising an instruct signal which is effective to coordinate presentation of said with a separate predetermined presentation sequence;  
detecting said instruct signal in said information transmission and passing said instruct signal to said processor;

delaying, under processor control, passing said instruct signal to a controllable apparatus;  
passing said instruct signal to said controllable apparatus based on a timing signal;  
and  
controlling said controllable apparatus based on said instruct signal.

**Claim 25:**

- (1) receiving said data to be transmitted and delivering the data to a transmitter;
- (2) receiving said one or more instruct signals which at the receiver station are effective to coordinate presentation of said data with a separate predetermined presentation sequence;
- (3) transferring said one or more instruct signals to a transmitter; and
- (4) transmitting an information transmission comprising said data and said one or more instruct signals.

**Claim 30:**

- storing a timing signal specifying a time or a series of times;  
controlling said computer a first time based on said timing signal, said first step of controlling comprising:
- (1) making a comparison between stored identification data designating a viewer interest and received data including timing data;
  - (2) selecting a portion of said received data based on said comparison; and
  - (3) storing said selected portion at a one of said one or more storage locations;
- controlling said computer a second time based on said timing signal, said second step of controlling comprising:
- (1) selecting a portion of computer programming instructions;

(2) generating or retrieving receiver station programming information content based on said selected portion of data and in accordance with said portion of instructions; and

(3) preparing to communicate said receiver station programming information content;

controlling said computer a third time based on said timing signal, said third step of controlling comprising:

(1) selecting a portion of at least one of said mass medium programming content and said receiver station programming information content;

(2) selecting one or more output devices;

(3) communicating said selected content to said selected one or more output devices;

thereby presenting to a subscriber at a controlled time mass medium programming with mass medium programming content and receiver station programming information content, said mass medium programming content and said receiver station programming information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.

**Claim 31:**

a first output device for outputting to a subscriber mass medium programming;

a storage device for storing a timing control signal, said timing control signal comprising a datum designating a time (a) to obtain from a first remote station some information to be processed for subsequent output in coordination with said mass medium programming or (b) to select some information associated with a coordinated programming presentation when received from a remote station;



a processor operatively connected to said storage device for receiving from one of said first remote station and a second remote station one or more instructions or identification data that designate one or more outputs to coordinate with said mass medium programming;

a receiver operatively connected to said processor for receiving a sequence of instructions which are effective to control the presentation of coordinated output;

a controller or computer operatively connected to said receiver section for controlling or communicating information to an output device; and

a second output device operatively connected to said controller or computer for presenting said one or more outputs coordinated with said mass medium programming.

**Claim 32:**

receiving a plurality of timing signals or a timing signal specifying a series of times;

detecting the presence of an instruct-to-coordinate signal received from a remote station or from a mass medium programming source, said instruct-to-coordinate signal designating a specific one of said plurality of timing signals or a specific one of said series of times;

selecting at a first controlled time one or more data to serve as a basis for a portion of said individualized mass medium programming presentation; and subsequently

outputting to said subscriber at a second controlled time in the course of a mass medium programming presentation processed information of said selected one or more data, at least one of said first controlled time and said second controlled time being in response to said instruct-to-coordinate signal and said processed information of said selected one or more data being outputted either as combined or sequential output with said mass medium programming or at a first of said one or more output devices

concurrently with said mass medium programming outputted at a second of said one or more output devices.

**Claim 33:**

a first receiver for receiving mass medium programming at said mass medium programming receiver station;

a first output device for outputting said mass medium programming;

a first processor for receiving from a remote station or from a mass medium programming source an instruct-to-coordinate signal that designates one or more data to select and input to a second processor;

a second receiver operatively connected to said first processor for receiving said one or more data, said one or more data being associated with said coordinated programming presentation, and communicating said data to said second processor at a specific time;

said second processor operatively connected to said second receiver for processing said designated data to output coordinated presentation content; and

a second output device operatively connected to said second processor for outputting said coordinated presentation content.

**Claim 34:**

receiving data to be processed or communicated in response to an instruct-to-coordinate signal;

detecting the presence of said instruct-to-coordinate signal received from a remote station or from a mass medium program source, said instruct-to-coordinate signal designating one or more mass medium programs to be coordinated;

selecting in response to said instruct-to-coordinate signal one or more of said received data to serve as a basis for a portion of said individualized mass medium program presentation; and subsequently

outputting to said subscriber processed information of said selected one or more data in the course of the presentation of said one or more mass medium programs, said processed information of said selected one or more data being outputted at one of said one or more output devices either as a combined or sequential output with said one or more mass medium programs or at a first of said one or more output devices concurrently or sequentially with said one or more mass medium programs outputted at a second of said one or more output devices.

**Claim 35:**

storing data at said remote data source;

receiving at said remote data source a query from said receiver station;

transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing some of said transmitted data;

transmitting from a second remote source to said receiver station a signal which controls said receiver station to select and process an instruct signal which is effective at said receiver station to coordinate two predetermined sequences, at least one of which is based on said selected data.

**Claim 36:**

- (1) inputting a viewer's or participant's reaction at said subscriber station;
- (2) receiving at said subscriber station at least one datum that designates an instruct signal to process or an output to deliver in consequence of subscriber input;

- (3) determining the presence of said subscriber input at said subscriber station by processing said viewer's or participant's reaction;
- (4) processing said information and coordinating two predetermined sequences at said subscriber station in consequence of said step of determining; and
- (5) transferring from said subscriber station to said one or more remote data collection stations an indication confirming execution of said step of processing.

**Claim 40:**

- (1) receiving an instruct signal to be transmitted by the remote intermediate data transmitter station and delivering said instruct signal to at least one origination transmitter, said instruct signal being effective at a receiver station to coordinate two predetermined sequences;
- (2) receiving one or more control signals which at the remote intermediate data transmitter station operate to control the communication of said instruct signal; and
- (3) transmitting said one or more control signals from said at least one origination transmitter before a specific time.

**Claim 43:**

- detecting one of the presence and absence of a broadcast or cablecast control signal;
- inputting an instruct-to-react signal to a processor based on said step of detecting;
- controlling said processor to output specific information in response to said step of inputting; and
- coordinating two predetermined sequences on the basis of information received from said processor based on said step of controlling.

**Claim 46:**

receiving a broadcast or cablecast transmission;

demodulating said broadcast or cablecast transmission to detect an information transmission thereon, said information transmission comprising an instruct signal which is effective to coordinate two predetermined sequences;

detecting said instruct signal on said information transmission and passing said instruct signal to said processor;

delaying, under processor control, the passing of said instruct signal to a controllable apparatus;

passing said instruct signal to said controllable apparatus on the basis of a timing signal; and

controlling said controllable apparatus based on said instruct signal.

**Claim 47:**

(1) receiving at a broadcast or cablecast transmitter station a first instruct signal which is effective at said at least one of a plurality of receiver stations to coordinate two predetermined sequences;

(2) transferring said first instruct signal to a first transmitter;

(3) receiving one or more first control signals at said transmitter station, said control signals addressing said first instruct signal to said processor of at least one specific receiver station; and

(4) transferring said one or more first control signals to one of said first transmitter and a second transmitter, said transmitter station broadcasting or cablecasting said first instruct signal and said one or more first control signals to said plurality of receiver stations.

**Claim 83:**

selecting a datum of interest;

storing the selected datum of interest;  
receiving a plurality of units of television programming at the receiver station;  
selecting one of the plurality of received units of television programming;  
outputting the selected unit of television programming at at least one output device at the receiver station;  
receiving a plurality of control signals;  
generating a locally pertinent display based on the stored datum of interest;  
outputting the locally pertinent display to the at least one output device to present the locally pertinent output comprising the outputted unit of television programming and the outputted locally pertinent display, at least one of said steps of generating and outputting the locally pertinent display being performed in response to at least one of said received plurality of control signals.

**Claim 84:**

selecting at least one datum of interest;  
storing the selected at least one datum of interest;  
receiving a digital information transmission containing (i) programming to be outputted in a television presentation and (ii) a control signal;  
detecting the control signal in the digital information transmission;  
generating the local output based on said stored selected at least one datum;  
outputting to the at least one output device the generated local output based on said step of detecting, to present an output at the at least one output device including the local output.

**Claim 89:**

selecting a datum of interest, said step of selecting comprising:

(a) storing at the receiver station an identification signal identifying the datum of interest;

(b) receiving from a remote data source a plurality of data including the datum of interest, each of said plurality of data comprising an identification signal and an information signal;

(c) comparing the identification signal of the datum of interest to the identification signals of each of the received data;

(d) selecting the datum of interest from the plurality of received data based on said step of comparing;

storing the selected datum of interest;

receiving a plurality of units of television programming at the receiver station;

selecting one of the plurality of received units of programming;

outputting the selected unit of programming on an output device at the receiver station;

receiving a plurality of control signals;

generating a local display based on at least the information signal of the stored datum of interest;

outputting the local display to the output device to present the local output comprising a portion of the outputted unit of television programming and the outputted local display, at least one of said steps of generating and outputting the local display being performed in response to at least one of said received plurality of control signals.

**Claim 90:**

receiving data in at least one information channel;

selecting at least a portion of said received data that is of interest to the user;

storing said selected at least said portion of said data;

receiving television programming and a control signal in said at least one information channel;  
detecting the control signal in the at least one information channel;  
generating a local graphic by processing said stored selected at least said portion of said data;  
outputting to a monitor the generated local graphic based on said step of detecting to present a visual display on the monitor comprising the local graphic.

**Claim 94:**

storing identification information identifying data of interest to the user;  
receiving data over an information channel;  
comparing the received data to the stored identification information;  
selecting, based on said step of comparing, the data of interest to the user from the received data;  
storing said selected data;  
receiving an information transmission comprising television programming and a control signal;  
detecting the control signal in the information transmission;  
generating a local graphic based on said stored selected data;  
outputting to a monitor the generated local graphic based on said step of detecting to present a visual display on the monitor including the local graphic.

**Claim 95:**

receiving one of a television broadcast and a television cablecast transmission, said transmission comprising television programming, data, and a control signal;  
detecting the data in the transmission;  
selecting at least a portion of said detected data that is of interest to the user;



storing said selected data;  
detecting the control signal in the transmission;  
generating a local graphic based on said stored selected data;  
outputting to a monitor the generated local graphic based on said step of detecting  
to present a visual display on the monitor including the local graphic.

**Claim 96:**

storing identification information identifying data of interest to the user;  
receiving a plurality of information channels;  
scanning each of said channels;  
identifying one of said plurality of information channels containing the data of  
interest to the user;  
tuning to the identified channel;  
detecting the data of interest received on the identified channel;  
storing said detected data of interest;  
receiving at least one information transmission containing television  
programming and a control signal;  
detecting the control signal in the information transmission;  
generating a local graphic based on said stored selected data;  
outputting to a monitor the generated local graphic based on said step of detecting  
to present a visual display on the monitor including the local graphic.

**Claim 97:**

storing identification information identifying data of interest to the user;  
receiving a plurality of information channels, at least one of said channels  
containing data;  
scanning each of said plurality of information channels;

comparing the identification information to the data on each said scanned channel;  
identifying the channel containing the data of interest based on said step of  
comparing;  
tuning to the identified channel;  
detecting the data of interest received on the identified channel;  
storing said detected data of interest;  
receiving at least one information transmission containing television  
programming and a control signal;  
detecting the control signal in the at least one information transmission;  
generating a local graphic based on said stored selected data;  
outputting to a display device at the receiver station the generated local graphic  
based on said step of detecting.

**Claim 98:**

selecting a datum of interest, said step of selecting comprising:  
(a) storing an identification signal at the receiver station identifying the datum of  
interest;  
(b) querying a remote data source;  
(c) receiving, in response to said step of querying, a plurality of data including the  
datum of interest from the remote data source, each of said plurality of data comprising  
an identification signal and an information signal;  
(d) selecting the datum of interest from the plurality of received data;  
storing the selected datum of interest;  
receiving a plurality of units of television programming at the receiver station;  
selecting one of the received plurality of units of television programming;  
outputting the selected unit of television programming on an output device at the  
receiver station;

receiving a plurality of control signals;  
generating a local display based on at least the information signal of the stored datum of interest;  
outputting the local display to the output device to present the local output comprising the outputted unit of television programming and the outputted local display, at least one of said steps of generating and outputting the user specific display being performed in response to at least one of said received plurality of control signals.

**Claim 99:**

storing data at said remote data source;  
receiving at said remote data source a query from said receiver station;  
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing at least a portion of said transmitted data;  
transmitting from a second remote source to said receiver station a signal which controls said receiver station to select and process an instruct signal which is effective at said receiver station to coordinate data processing with at least one of communication and presentation of television programming.

**Claim 100:**

inputting a subscriber reaction at said subscriber station;  
receiving at said subscriber station information that designates at least one of an instruct signal to process and an output to deliver in consequence of subscriber input;  
determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;

processing an instruct signal which is effective to coordinate data processing with at least one of communication and presentation of television programming at said subscriber station in consequence of said step of determining; and

transferring from said subscriber station to at least one remote data collection station at least one datum at least one of confirming delivery of said instruct signal from said step of processing and confirming delivery of said effect from said step of processing.

**Claim 104:**

receiving said television programming at said at least one origination transmitter station and delivering said television programming to at least one origination transmitter, said television programming to have at least one associated instruct signal which is effective at the at least one receiver station to coordinate data processing with at least one of communication and presentation of said television programming;

receiving at least one control signal which at the remote intermediate television transmitter station operates to control the communication of at least one of said television programming and said at least one instruct signal; and

transmitting said at least one control signal from said at least one origination transmitter before a specific time.

**Claim 108:**

detecting one of the presence and absence of one of a broadcast and a cablecast control signal;

inputting an instruct-to-react signal to a processor based on said step of detecting one of the presence and absence of a control signal;

controlling said processor to output specific information in response to said step of inputting an instruct-to-react signal; and

coordinating data processing with communication or presentation of television programming on the basis of information received from said processor based on said step of controlling a processor.

**Claim 112:**

receiving one of a broadcast and a cablecast transmission;

demodulating said one of a broadcast and a cablecast transmission to detect an information transmission thereon, said information transmission comprising an instruct signal which is effective to coordinate data processing with at least one of communication and presentation of television programming;

detecting said instruct signal on said information transmission and passing said instruct signal to said processor;

delaying, under processor control, the passing of said instruct signal to a controllable apparatus;

passing said instruct signal to said controllable apparatus on the basis of said timing signal; and

controlling said controllable apparatus based on said instruct signal.

**Claim 113:**

receiving at one of a broadcast and a cablecast transmitter station an instruct signal which is effective at said at least one of said plurality of receiver stations to coordinate data processing with at least one of communication and presentation of television programming and delivering the instruct signal to a transmitter;

receiving at said transmitter station at least one control signal which at the receiver station operates to communicate the instruct signal to a specific processor; and

transferring said at least one control signal to the transmitter, said transmitter transmitting the instruct signal and the at least one control signal.

**Claim 144:**

tuning a first receiver to a first one of a broadcast transmission and a cablecast transmission;

receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes programming and a first control signal;

outputting the received programming on a first output device;

detecting the received first control signal;

tuning a second receiver, based on said detected first control signal, to receive a second one of a broadcast transmission and a cablecast transmission, wherein at least a portion of said second one of a broadcast transmission and a cablecast transmission is related to the received programming;

outputting the related at least a portion of said second one of a broadcast transmission and a cablecast transmission to a second output device wherein said receiver station outputs said first tuned one of a broadcast transmission and a cablecast transmission and said related at least a portion of said second one of a broadcast transmission and a cablecast transmission simultaneously.

**Claim 145:**

tuning a television receiver to a first one of a broadcast transmission and a cablecast transmission;

receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes television programming and a first control signal;

outputting the received television programming on a first output device;

detecting the received first control signal;

tuning an information receiver, based on said detected first control signal, to receive a second one of a broadcast transmission and a cablecast transmission, wherein at least a portion of said second one of a broadcast transmission and a cablecast transmission is related to the received television programming;

outputting the related at least a portion of said second one of a broadcast transmission and a cablecast transmission to a second output device wherein said receiver station outputs said first tuned one of a broadcast transmission and a cablecast transmission and said related at least a portion of said second one of a broadcast transmission and a cablecast transmission simultaneously.

**Claim 146:**

tuning a television receiver to a first one of a broadcast transmission and a cablecast transmissions;

receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes television programming and a first control signal;

outputting the received television programming on a first output device;

detecting the received first control signal;

tuning a radio receiver, based on said detected first control signal; to receive a second one of a broadcast transmission and a cablecast transmission, wherein said second one of a broadcast transmission and a cablecast transmission includes radio programming, said radio programming being related to said received television programming;

outputting the received radio programming to an output device.

**Claim 147:**

(1) inputting a subscriber reaction at the subscriber station;

- (2) receiving at said subscriber station information that designates at least one of at least one instruct signal to process and an output to deliver in consequence of a subscriber input;
- (3) determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;
- (4) processing at least one instruct signal which is effective to coordinate a media presentation at said subscriber station in consequence of said step of determining; and
- (5) transferring from said subscriber station to said at least one remote data collection station at least one datum confirming delivery of at least one of:
  - (a) said at least one instruct signal from said step of processing; and
  - (b) said effect from said step of processing.

**Claim 151:**

- (1) receiving said television programming at said at least one origination transmitter station and delivering said television programming to at least one origination transmission transmitter, said television programming having an instruct signal which is effective at at least one of said remote television transmitter station and said at least one receiver station to coordinate a media presentation;
- (2) receiving said at least one control signal which at the remote television transmitter station operates to control the communication of said television programming; and
- (3) transmitting said at least one control signal from said at least one origination transmitter station before a specific time.

**Claim 155:**



(1) receiving at said at least one remote transmitter station at least one instruct signal which operates to coordinate a media presentation and operates at said receiver station to assemble and communicate said at least one receiver specific datum to said remote data collection station;

(2) receiving a control signal which operates at said at least one remote transmitter station to control the communication of said at least one instruct signal and communicating said control signal to said at least one remote transmitter station;

(3) receiving at least one of a code and an indication designating said at least one instruct signal to be transmitted by said at least one remote transmitter station, wherein said at least one of said code and said indication to serve at said receiver station as a source from which to select said at least one receiver specific datum; and

(4) transmitting at least one information transmission including said at least one instruct signal and said at least one of said code and said indicator from said at least one remote transmitter station.

**Claim 158:**

receiving an instruct signal at a transmitter station and delivering said instruct signal to a transmitter, said instruct signal being effective at said at least one receiver station to coordinate a media presentation;

receiving at least one of a code and a datum at said transmitter station, wherein said at least one of a code and a datum designates at least one of said instruct signal and said subscriber reaction;

receiving at least one control signal at said transmitter station, wherein said at least one control signal at said at least one receiver station operates to at least one of decrypt and enable at least a portion of said instruct signal;

transferring at least one of said at least one of a code and a datum and said at least one control signal to said transmitter at said transmitter station; and

transmitting said instruct signal and said at least one of said at least one of a code and a datum and said at least one control signal from said transmitter station.

**Claim 163:**

detecting one of a presence and an absence of one of a broadcast control signal and a cablecast control signal;

inputting an instruct-to-react signal to a processor based on said step of detecting;

controlling said processor to output specific information in response to said instruct-to-react signal; and

coordinating a media presentation on the basis of said specific information received from said processor based on said step of controlling said processor.

**Claim 167:**

receiving one of a broadcast transmission and a cablecast transmission;

demodulating said one of said broadcast transmission and said cablecast transmission to detect an information transmission thereon, said information transmission including an instruct signal which is effective to coordinate media presentation;

detecting said instruct signal on said information transmission and passing said instruct signal to said processor;

delaying, under processor control, the passing of said instruct signal to a controllable apparatus;

passing said instruct signal to said controllable apparatus on the basis of the timing signal; and

coordinating said media presentation based on said instruct signal.

**Claim 168:**

(1) receiving data to be transmitted and delivering the data to a transmitter;

- (2) receiving the at least one instruct signal which at the at least one mass medium programming receiver station is effective to coordinate a media presentation based on the data;
- (3) transferring said at least one instruct signal to the transmitter; and
- (4) transmitting at least one information transmission including said data and said at least one instruct signal.

**Claim 172:**

receiving first data and video programming, said video programming to be outputted for a duration of time, wherein only a portion of said duration contains at least a first time interval of specific relevance, and wherein at least one of said first data and said video programming is received from at least one remote transmitter station;

selecting and delivering said video programming to said at least one first output device for output to a user;

detecting said first data before a time period during which user specific information will be processed and delivering said first data to said computer;

generating second data to serve as a basis for delivering said user specific programming by processing at least a first of said first data in said time period;

communicating at least one of (i) at least a second of said first data and (ii) at least a first of said second data to said at least one first output device in said at least said first time interval of specific relevance based on said step of generating; and

outputting said user specific programming, said user specific programming including said video programming and said at least one of said first data and said second data.

**Claim 199:**

receiving at least one of video programming and said first data at at least a first transmitter station, said video programming to be displayed at said at least one output device for at least a duration of time, wherein only a portion of said duration of time is to include at least one time interval of specific relevance, and wherein said first data are to be processed at said at least one receiver station to generate said second data;

commencing to transfer said at least one of said video programming and said first data to at least a first transmitter at a first specific time; and

transmitting from said at least one transmitter station at least one information transmission including said at least one of said video programming and said first data.

**Claim 215:**

receiving at least one of video programming and said first data at at least a first transmitter station, said video programming to be outputted at said at least one output device for at least a duration of time, wherein only a portion of said duration of time to include at least one time interval of specific relevance, and wherein said first data are to be processed at said at least one receiver station to generate said second data;

receiving at least a first control signal which operates at said at least said first transmitter station to communicate said at least one of said video programming and said first data to at least a first transmitter; and

transmitting from said at least one transmitter station at least one information transmission including said at least one of said video programming and said first data.

**Claim 235:**

receiving first data and video programming, said video programming to be outputted for a duration of time, wherein only a portion of said duration contains at least one time interval of specific relevance, and at least one of said first data and said video programming is received from at least one remote transmitter station;

selecting and delivering said video programming to said at least one output device for output to a user;

storing said first data before a time period during which user information will be processed;

generating second data to serve as a basis for delivering said customized programming by processing at least one of said first data in said time period;

communicating said second data to said at least one output device in said at least one time interval of specific relevance based on said step of generating second data; and

outputting said customized programming, said customized programming including said video programming and said second data.

**Claim 236:**

a first receiver section for receiving mass medium programming at said mass medium programming receiver station;

a first of a plurality of output devices operatively connected to said first receiver section for outputting said mass medium programming;

a first processor operatively connected to said first receiver section for receiving from one of a remote station and a mass medium programming source a signal that designates at least one coordinated programming output to present;

a second receiver section operatively connected to said first processor for receiving an instruct signal which is effective to control a specific fashion of coordinated presentation;

a second processor operatively connected to said second receiver section for controlling one of said plurality of output devices; and

a second of said plurality of output devices operatively connected to said second processor for outputting coordinated mass medium programming material.

**Claim 237:**

receiving data to be processed for presentation in coordination with a mass medium programming output;

detecting an instruct-to-coordinate signal received from a remote station or from a mass medium programming source, said instruct-to-coordinate signal designating a plurality of one of input sources and times, and one of one output time and a location;

controlling a plurality of output devices to communicate mass medium programming, at least one of said received data to be processed for presentation in coordination with a mass medium programming output, and at least one instruction which is effective to perform one of the functions of generating and outputting data for presentation with mass medium programming; and

outputting to a user a coordinated presentation of mass medium programming and at least one locally pertinent datum, said coordinated presentation being outputted at said at least one output device as one of at least one locally pertinent datum one of combined with and output sequentially with mass medium programming, and as at least one locally pertinent datum outputted at a first of said at least one output device concurrently with mass medium programming outputted at a second of said at least one output device.

**Claim 238:**

a first receiver section for receiving mass medium programming at said mass medium programming receiver station;

a first output device operatively connected to said receiver station for outputting said mass medium programming to a subscriber;

a control signal detector operatively connected to said receiver section for detecting the presence of a timing signal communicated from one of a remote station and a mass medium programming source;

a processor operatively connected to said control signal detector for controlling a selected output device in response to an instruct-to-coordinate signal that designates at least one of a signal kind and a device to control;

a second output device operatively connected to said processor for outputting selected mass medium programming material in response to a control signal, said coordinated mass medium programming material being outputted at said receiver station with said mass medium programming.

**Claim 239:**

receiving a plurality a signals to be coordinated for presentation to a user;

detecting the presence of an instruct-to-coordinate signal received from one of a remote station and a mass medium programming source, said instruct-to-coordinate signal designating one of a specific coordinated presentation to output and a specific kind of mass medium programming to present;

selecting mass medium programming to coordinate;

selecting locally pertinent information to coordinate; and

outputting to a user a coordinated presentation of said selected mass medium programming and said selected locally pertinent information, with at least one of said selected mass medium programming and said selected locally pertinent information being selected the basis of one datum associated with said specific kind of mass medium programming, wherein said coordinated presentation is outputted at said at least one output device as one of (i) a combined and (ii) a sequential presentation of said locally pertinent information with said mass medium programming, and (iii) said locally pertinent information outputted at a first of said at least one output device concurrently with said mass medium programming outputted at a second of said at least one output device.

**Claim 240:**

receiving a plurality of signals to be coordinated for presentation to a subscriber, at least two of said plurality of signals containing different kinds of mass medium programming;

detecting the presence of an instruct-to-coordinate signal received from a remote station or from a mass medium programming source, said instruct-to-coordinate signal designating one of a specific coordinated output to deliver, and a specific kind of mass medium programming to present;

outputting first mass medium programming;

selecting second mass medium programming in response to said detected instruct-to-coordinate signal; and

outputting to a user a coordinate presentation based on said first mass medium programming and said selected second mass medium programming, said coordinated mass medium programming presentation being outputted at at least one of said plurality of output devices one of concurrently and sequentially based on different kinds of mass medium programming.

**Claim 241:**

receiving one of a plurality of timing signals and a timing signal specifying a series of times;

detecting the presence of an instruct-to-coordinate signal received from one of a remote station and from a mass medium programming source, said instruct-to-coordinate signal designating one of a specific one of said plurality of timing signals and a specific one of said series of times;

generating at a first controlled time at least one local output to be coordinated; and subsequently



outputting to a subscriber at a second controlled time in the course of a mass medium programming presentation one of said at least one locally generated output, one of said first controlled time and said second controlled time being in response to said instruct-to-coordinate signal and said outputted locally generated output being outputted as a one of (i) a combined and (ii) a sequential output with said mass medium programming and at a first of said at least one output device concurrently (iii) parallel outputs at a plurality of said at least one output devices.

**Claim 242:**

receiving one of a plurality of timing signals and a timing signal specifying a series of times;

detecting the presence of an instruct-to-coordinate signal received from one of a remote station and from a mass medium programming source, said instruct-to-coordinate signal designating one of a specific one of said plurality of timing signals and a specific one of said series of times;

generating at a first controlled time at least one local output to be coordinated; and subsequently

outputting to a user at at least one second controlled time in the course of a mass medium programming presentation a one of series of locally generated outputs, one of said first controlled time and said second controlled time being in response to said instruct-to-coordinate signal and a portion of said series of locally generated outputs being outputted as one of (i) a combined and (ii) a sequential output of locally generated information with said mass medium programming, and (iii) a parallel output at a first of said at least one output device concurrently with mass medium programming outputted at a second of said at least one output device.

**Claim 243:**

receiving a plurality a signals to be coordinated for presentation to a user, at least two of said plurality of signals containing different kinds of mass medium programming;

detecting the presence of a plurality of instruct-to-coordinate signals, at least one instruct-to-coordinate signal received from one of a remote station and a mass medium programming source;

performing in response to said at least one instruct-to-coordinate signal received from one of a remote station and a mass medium programming source one of:

- (1) selecting a receiver specific datum to process;
- (2) generating locally datum to present;
- (3) selecting a receiver specific output to communicate; and
- (4) controlling at least one of said plurality of output devices;

outputting to a user a presentation of mass medium programming and locally pertinent information, said presentation being in accordance with said at least one instruct-to-coordinate signal received from one of a remote station and a mass medium programming source, and said mass medium programming and said locally pertinent information being outputted at said at least one of said plurality of output devices one of concurrently and sequentially.

**Claim 245:**

- (1) inputting a user reaction at a subscriber station;
- (2) receiving at said user station information that designates one of an instruct signal to process and an output to deliver in consequence of user input;
- (3) determining the presence of said user input at said user station by processing said user reaction;
- (4) processing an instruct signal which is effective to start a predetermined coordination sequence at said user station in consequence of said step of determining; and

(5) transferring from said user station to at least one remote data collection station an indication confirming one of delivery of said instruct signal from said step of processing and delivery of said effect from said step of processing.

**Claim 249:**

receiving said instruct signal to be transmitted by said remote intermediate data transmitter station and delivering said instruct signal to at least one origination transmitter, said instruct signal being effective at said receiver station to start a predetermined coordination sequence;

receiving said at least one control signal which at said remote intermediate data transmitter station operates to control communication of said instruct signal; and

transmitting said at least one control signal from said at least one origination transmitter before a specific time.

**Claim 252:**

detecting one of the presence and absence of one of a broadcast cablecast control signal;

inputting an instruct-to-react signal to a processor based on said step of detecting; controlling said processor to output specific information in response to said step of inputting; and

starting a predetermined coordination sequence on the basis of information received from said processor based on said step of controlling.

**Claim 256:**

receiving one of a broadcast and a cablecast transmission;

demodulating said one of said broadcast and said cablecast transmission to detect an information transmission thereon, said information transmission comprising an instruct signal which is effective to start a predetermined coordination sequence;

detecting said instruct signal on said information transmission and passing said instruct signal to said processor;

delaying, under processor control, the passing of said instruct signal to a controllable apparatus;

passing said instruct signal to said controllable apparatus on the basis of said timing signal; and

controlling said controllable apparatus based on said instruct signal.

**Claim 257:**

(1) receiving at one of a broadcast and a cablecast transmitter station said instruct signal which is effective at the receiver station to start a predetermined coordination sequence and delivering said instruct signal to a transmitter;

(2) receiving at said one of said broadcast and said cablecast transmitter station at least one control signal which at the receiver station operates to communicate the instruct signal to said at least one processor; and

(3) transferring said at least one control signal to the transmitter, said transmitter transmitting the instruct signal and the at least one control signal.

**Claim 262:**

selecting a datum ;

storing said selected datum at said receiver station;

receiving a plurality of television programming units at said receiver station;

selecting one of said received plurality of programming units, comprising the steps of:

(a) detecting an identification signal at said receiver station ;  
(b) identifying one of a channel and a frequency communicating television programming based on said step of detecting;  
(c) tuning to receive one of said identified channel and said identified frequency;  
(d) selecting said television programming received on said step of tuning;  
outputting said selected television programming on an output device at said receiver station;  
detecting a signal;  
generating a local display based on said stored selected datum ;  
outputting said local display to said output device to present local output comprising said outputted television programming and said outputted local display, wherein at least one of said steps of generating and outputting said display is performed in response to said detected plurality of control signal.

**Claim 265:**

selecting a datum ;  
storing said selected datum at said receiver station;  
storing information at said receiver station identifying a time and a channel for receiving television programming ;  
tuning to said identified channel at or before said identified time;  
receiving over said identified channel an information transmission comprising said television programming ;  
outputting said received television programming on an output device at said receiver station;  
detecting a control signal;  
generating a local display based on said stored datum of interest;

outputting said user specific display to said output device to present a local output comprising said outputted television programming and said outputted local display, wherein at least one of said steps of generating and outputting is performed in response to said detected control signal.

**Claim 266:**

selecting a datum ;  
storing said selected datum at said receiver station;  
receiving a plurality of television programming units at said receiver station;  
selecting one of said plurality of received television programming units;  
outputting said selected television programming unit on an output device at said receiver station;  
detecting a first control signal;  
generating locally pertinent information based on stored data of interest in accordance with said first control signal;  
detecting a second control signal;  
outputting said locally pertinent information to said output device in response to said second control signal, to present a local output comprising a portion of said outputted television programming unit and said outputted locally pertinent information.

**Claim 267:**

storing data at said remote data source;  
receiving at said remote data source a query from said receiver station;  
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing at least a portion of said transmitted data;

transmitting from a second remote source to said receiver station a signal which controls said receiver station to select and process an instruct signal which is effective at said receiver station to coordinate a presentation to a user of output materials communicated at least one of from different sources and at different times, said presentation including said receiver specific datum.

**Claim 268:**

inputting a subscriber reaction at said subscriber station;  
receiving at said subscriber station information that designates at least one of an instruct signal to process and an output to deliver in consequence of subscriber input;  
determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;  
processing said instruct signal to coordinate a presentation of output materials communicated at least one of from different sources and at different times at said subscriber station in consequence of said step of determining; and  
transferring from said subscriber station to said at least one remote data collection station at least one datum at least one of confirming delivery of said instruct signal from said step of processing and confirming delivery of said coordinated presentation from said step of processing.

**Claim 272:**

receiving said television programming at said at least one origination transmitter station and delivering said television programming to at least one origination transmitter, said television programming having an instruct signal which is effective at said at least one receiver station to coordinate a presentation of output materials communicated at least one of from different sources and at different times;

receiving said at least one control signal which at said remote intermediate television transmitter station operates to control the communication of said television programming; and

transmitting said at least one control signal from said at least one origination transmitter before a specific time.

**Claim 276:**

receiving said at least one instruct signal at said at least one origination transmitter station and delivering said at least one instruct signal to at least one origination transmitter, said at least one instruct signal (i) being effective at said at least one receiver station to generate output information content to be included in a coordinated presentation of output materials communicated at least one of from different sources and at different times and (ii) having an associated one of a code and a datum designating one of signal content and output information content to be generated;

receiving said at least one control signal that at said remote intermediate data transmitter station operates to control the communication of said at least one instruct signal; and

transferring said at least one control signal from said at least one origination transmitter before a specific time, said transmitter transmitting said at least one instruct signal, said associated one of a code and a datum, and said at least one control signal.

**Claim 282:**

detecting one of the presence and absence of one of a broadcast and a cablecast control signal;

inputting an instruct-to-react signal to a processor based on said step of detecting;

controlling said processor to output specific information in response to said step of inputting said instruct-to-react signal; and



coordinating a presentation of output materials communicated at least one of from different sources and at different times on the basis of information received from said processor based on said step of controlling said processor.

**Claim 300:**

receiving one of a broadcast transmission and a cablecast transmission;

demodulating said one of a broadcast transmission and a cablecast transmission to detect an information transmission thereon, said information transmission including an instruct signal which is effective to coordinate a presentation of output materials communicated at least one of from different sources and at different times;

detecting said instruct signal on said information transmission and passing said instruct signal to said processor;

delaying, under control of said processor, the passing of said instruct signal to a controllable apparatus;

passing said instruct signal to said controllable apparatus on the basis of said timing signal; and

coordinating said presentation of output materials based on said instruct signal.

**Claim 302:**

receiving at one of a broadcast and a cablecast transmitter station a first instruct signal which is effective at said at least one of a plurality of receiver stations to coordinate a presentation of output materials communicated at least one of from different sources at different times and delivering said first instruct signal to a transmitter;

receiving at said transmitter station at least one first control signal which at said at least one of a plurality of receiver stations operates to communicate said first instruct signal to said at least one processor; and

transferring said at least one control signal to said transmitter, said transmitter transmitting said first instruct signal and said at least one first control signal.

**D. Response to Allegation of Defective Oath/Declaration**

The Examiner asserts that the oath or declaration is defective (Office Action at 235-237.) The Examiner asserts that the instant application is a continuation-in-part of Application No. 113,329, filed August 30, 1993. Thus, the Examiner requires a new oath or declaration that acknowledges the duty to disclose to the Office all information known to Applicants to be material to patentability which occurred between the filing date of the prior application and the filing date of the instant application. Applicants note that the disclosure as filed June 7, 1995 is identical to the disclosure of Application No. 113,329. Applicants properly filed the instant application under the provisions of 37 C.F.R. § 1.60 as in effect on June 7, 1995. Rule 60 provided conditions under which an Applicant may omit signing a new oath or declaration in a continuation application. Applicants respectfully submit that they have fully complied with the provisions of Rule 60 as in effect upon filing of the instant application. Accordingly, Applicants request that the requirement for a new oath or declaration be withdrawn. Notwithstanding the above, should the Examiner maintain the requirement to file a new oath or declaration, Applicants respectfully request that the requirement be held in abeyance until allowable subject matter is indicated as provided under 37 C.F.R. § 1.111.

The Examiner addresses the preliminary amendment filed June 7, 1995, which substituted on page 1 a paragraph under 35 U.S.C. § 120 including references to related applications. This amendment included the statement: "This is a continuation of application serial no. 08/113,329, filed August 30, 1993, herein incorporated by reference in its entirety." The Examiner apparently believes this statement introduced new matter into the specification. As the document attempted to be incorporated by reference is an

*identical* specification to the specification of the instant application, the Examiner's basis for this position is not entirely clear to Applicants. However to advance the prosecution of this application Applicants request that any alleged new matter be canceled by the phrase "herein incorporated by reference in its entirety" from page 1.

**E. Response to Objection to the Specification**

The Office Action states, "The instant specification is objected to because applicants are changing, some +18 years after making the '81 disclosure, the original written description." (Office Action at 8 & 234.) Applicants note for the record that the amendment to the specification that the Office Action refers to is non-existent in the instant application. Applicants believe that the Office Action was referring to another one of Applicants' co-pending amendments to the specification. However, the instant amendment to the specification at page 37 corresponds to the allegations raised by the Office Action and will be addressed below.

The amendment changes page 37, lines 23-25, of the specification to read:

Controller, 39, 44, or 47, is preprogrammed to receive [units] words of signal information, to assemble said [units] words into signal [words] units that subscriber station apparatus can receive and process, and to transfer said [words] units to said apparatus.

(Additions underlined, deletions bracketed.)

Applicants submit that this amendment corrects an inadvertent error made in preparation of the specification as filed. The amendment includes no new matter. Applicants respectfully request that the Examiner withdraw the objection for the following reasons.

The amended language describes that aspect of the invention in which signal words are received and assembled into signal units. The assembly of signal words into signal units is described consistently throughout the specification in the manner effected

by the amendment. As the amendment merely clarifies the disclosure, the amendment introduces no new matter.

The specification as filed, on page 14, lines 23-25, describes, "discrete words . . . that receiver apparatus must assemble in order to receive one complete instruction." A signal unit is defined as "one complete signal instruction." (Spec. at 14 ll. 26-27.) Thus, words must be assembled to create a signal unit. The specification consistently discloses that signal words are received and assembled into signal units.

Further, the specification consistently refers to signal words as the basic information block from which other information units are formed. The specification at page 65, lines 34-35, states; "Each message is composed in a whole number of signal words." "Said information consists of a series of discrete signal words." (Spec. at 70 ll. 28-29.) "[S]aid given signal word is an EOFS WORD and may be part of an end of file signal." (Spec. at 71 ll. 5-7.) "[T]o detect those particular uninterrupted series of EOFS WORDs that constitute end of file signals." (Spec. at 74 ll. 11-12.) "For example, end of file signals could include the signal word preceding said uninterrupted sequence." (Spec. at 82 ll. 23-25.) Signal words are formed into commands and other signals throughout the specification.

In the recent Office Action, the sentence on page 15, lines 4-6, of the specification is relied upon as evidence that the amendment is new matter. (Office Action at 8 & 234.) The sentence reads, "Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations." This statement simply describes the circumstance in which a higher level word could contain a lower level unit. Obviously, this statement does not contradict the prior statement that discrete *words must* be assembled to obtain a signal *unit*. As signal words are disclosed as being assembled into signal units, the amendment cannot contain new matter, regardless of the other variations disclosed in the specification. The statement relied upon by the Examiner actually supports the conclusion that the amendment does not introduce new matter.

*In Personalized Media Communications, L.L.C. v. International Trade Commission*, No. 97-1532 (Fed. Cir. Jan. 7, 1999), the U.S. Court of Appeals for the Federal Circuit construed claim 35 in U.S. Patent No. 5,335,277 (the '277 patent). The '277 patent issued to Applicants on August 2, 1994, from a specification identical to the specification filed in the instant application. In construing the claims of the '277 patent, the Court concluded that the prosecution history of the '277 patent did not prevent the term "information of a selected television unit" from reading on channel and time information. The Court thus addressed the meaning of the term "selected television program unit." The Court noted that "a selected program unit" is a particular television program, such as Wall Street Week. The Court did not address the meaning of the terms "signal unit" or "signal word." No reasoning set forth by the Court conflicts with Applicants' assertion that the specification discloses that signal units are assembled from signal words.

The amended language describes the assembly of signal words into signal units. The assembly of signal words into signal unit is described at page 14, lines 23-27, of the specification. Therefore, the amendment does not include new matter. Accordingly, Applicants request that the objection to the specification be withdrawn.

**F. Response to Rejections under 35 U.S.C. § 112**

**1. Response to Rejections under §112, first paragraph**

**a) Response to Written Description Rejections**

**(1) The Office Action Fails to Establish a Prima Facie  
Rejection Under the Written Description Requirement of  
35 U.S.C. § 112**

In the Office Action, the Examiner rejects claims 6-316 under 35 U.S.C. § 112, first paragraph for incorporating subject matter not described in the specification as filed in such a manner as to reasonably convey to one skilled in the relevant art that the

inventors, at the time the application was filed, were possessed of the claimed invention. (Office Action at 8.) Applicants firmly believe that the instant specification and respective priority documents, all of which are substantially identical, each describe the subject matter of the pending claims. Thus, in Applicants' view, the pending claims fully comply with the requirements of the first paragraph of 35 U.S.C. § 112. Accordingly, Applicants respectfully request the withdrawal of the rejections of claims 6-316 under 35 U.S.C. § 112, first paragraph.

The Examiner notes that the instant specification does not include the exact words and phrases of the disclosure of Applicants' parent Application No. 317,510 (the '81 disclosure.) (Office Action at 3.) The Examiner argues that since Applicants successfully assert that the '81 disclosure supports the pending claims and the '81 disclosure is not duplicated verbatim in the instant specification then it follows that the instant specification does not support the pending claims. The Examiner assumes that the subject matter in the '81 disclosure that is not duplicated verbatim within the instant specification is omitted from the instant specification. This assumption is incorrect. Applicants maintain that, although the '81 disclosure is not included in identical words in the instant specification, the subject matter of the '81 disclosure is specifically included in the instant specification.

"The function of the description requirement is to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him." *In re Wertheim*, 541 F.2d 257, 262, 191 U.S.P.Q. 90, 96 (C.C.P.A. 1976). Applicants rely on the filing date of November 3, 1981. On this date, Applicants filed Application No. 317,510, now issued as U.S. Patent No. 4,694,490 (the '490 patent). The specification of the '490 patent (the '81 disclosure) clearly demonstrates that Applicants had possession of the subject matter presently claimed.

"[T]he PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention

defined by the claims.” *Id.* at 263, 191 U.S.P.Q. at 97. The Examiner has failed to meet this burden. The record of the prosecution of the instant application fails to include any reasons why persons skilled in the art would not recognize from the specification that Applicants invented the invention defined by the pending claims. The Examiner merely states, at page 15 of the Office Action, that the “instant ‘571 disclosure has not been found to describe the alleged ‘81 support ‘ . . . in such full, clear, concise, and exact terms . . . ’ as is required under the law of 35 U.S.C. 112 1st paragraph.” The Examiner also provides a list of claim phrases that are deemed to lack support (Office Action at 8-161). This list includes practically all phrases from nearly all the pending claims and amounts to an unsubstantiated assertion that the pending claims as a whole are unsupported under the written description requirement of 35 U.S.C. § 112, first paragraph. The Examiner has failed to present evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.

The outstanding rejection under the written description requirement is merely a blanket, unsupported statement that the pending claims fail to meet the requirements of 35 U.S.C. § 112, first paragraph. Because the Examiner includes no reasons for the rejection, the only manner for Applicants to respond is to exhaustively demonstrate where each and every limitation in the pending claims is found in the specification without regard to how clearly the specification may show each limitation to those skilled in the art. However in order to advance the prosecution of the instant application, Applicants submit herewith, Appendix A, reciting specification support for each claim limitation to the instant specification at to the parent 1981 priority application.

**(2) Applicants’ Summary and Description of Integration of the Instant Specification**

Each manifestation of Applicants’ claimed invention, regardless of how the manifestation may be described in the specification, is a single embodiment of the

invention. Thus, the specific support provided for each claim is by definition from within a single embodiment.

Applicants acknowledge that there are numerous embodiments of the presently claimed invention described in the specification. Applicants' specification is a single cohesive document with each successive section and example extending and developing the preceding disclosure. The various disclosures, examples, and subsystems disclosed within the specification are clearly intended to be integrated into general working systems, methods and apparatus. Applicants' specification is very carefully constructed to provide clear and unequivocal contextual relationship between the various inventive concepts, processes and apparatus that Applicants disclose.

At the outset, Applicants focus on the importance of *integrating* functionalities and state:

It is the object of this invention to unlock this great potential in the fullest measure by means of an *integrated system* of programming communication that joins together all these capacities most efficiently.

(Spec. at 3 ll. 30-33)(emphasis added).

In "Background of the Invention" (Spec. at 1-11), Applicants list a multitude of problems and limitations in the prior art for which this integrated system provides valuable solutions. Applicants *also introduce focal opportunity*:

Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)

Unlocking this potential is desirable because these new media will add substantial richness and variety to the communication of ideas, information and



entertainment. Understanding complex subjects and making informed decisions will become easier.

(Spec. at 2 ll. 8-24.)

Applicants explicitly acknowledge that to succeed in the fullest measure means solving many technical problems as well as providing for a broad spectrum of subscriber information demands and equipment capacities:

To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.

But it requires much more.

To unlock this potential fully requires *a system with efficient capacity* for satisfying the demands of subscribers who have *little receiver apparatus and simple information demands* as well as subscribers who have *extensive apparatus and complex demands*. It requires capacity for transmitting and organizing vastly more information and programming than any one-channel transmission system can possibly convey at one time. It requires capacity for controlling intermediate transmission stations that receive information and programming from many sources and for organizing the information and programming and retransmitting the information and programming so as to make the use of the information and programming at ultimate receiver stations as efficient as possible.

(Spec. at 2 l. 25 through p. 3 l. 8)(emphasis added).

To disclose how the integrated system overcomes the identified limitations, solves the problems, and realizes this potential fully, requires *step-by-step teaching* of separate elements – methods as well as apparatus – of Applicants' disclosed system. At each new step, the *contextual relationship* of the new teaching to earlier teachings *is explicitly stated*. Applicants highlight below how this step-by-step teaching carries the relationships of the various separate elements throughout the disclosure.

**(a) "One Combined Medium" (pages 19-28)**

In a section, (Spec. at 19-28), entitled "One Combined Medium," (Spec. at i l. 16 and p. 19 l. 5), which focuses on the subscriber station of Fig.1, Applicants begin by teaching "a *video/computer* combined medium," (Spec. at 19 l. 6)(emphasis added). A

local image – Fig. 1A (*See Spec. at 25 ll. 9-14*) – is provided at the subscriber station and combined with a remotely supplied video image – Fig. 1B (*See Spec. at 25 ll. 30-33*) – in order to deliver a combined image of Fig 1C (*See Spec. at 26 ll. 8-15*). (Simultaneously, user specific local images are provided at other subscriber station and combined with the remotely supplied video image – (*see, specification at page 26 lines 16-19.*)

(As an example of Applicants' step-by-step teaching approach, not until a section entitled "Audio Overlays and Other Overlays," which begins on page 463, are Applicants prepared to focus on Fig. 7D and teach "a radio/computer combined medium," (*Spec. at 464 l. 6*), or teach "a broadcast print and computer combined medium," (*Spec. at 466 l. 20*), or focus on Fig. 7E and teach "the full combined medium of television and computers," (*Spec. at 468 ll. 10-11*).

In the "One Combined Medium" section, Applicants disclose concepts of "a combining operation" and "synchronization". For example: "subscriber station apparatus ... execute *a combining operation in synchronization....*" (*Spec. at 26 ll. 21-22*)(emphasis added).

Applicants also teach *order* of operations. For example, one operation. (*Spec. at 24 ll. 5-27*), may provide the local image–Fig. 1A–at the subscriber station; a different operation, (*Spec. at 26 ll. 4-11*), may deliver the combined image–Fig. 1C. ("One Combined Medium" also discloses that a third operation, (*Spec. at 27 ll. 3-7*), may terminate delivery of the combined image.)

More broadly, in "One Combined Medium" Applicants teach *important concepts regarding instructions* and, *most importantly, timing*. For example:

Decoder, 203, is **preprogrammed** to detect digital information .... Microcomputer, 205, is **preprogrammed** ... to respond ... to *instruction signals* embedded in the ... programming transmission.

(*Spec. at 21 ll. 14-24*)(emphasis added).

In said series in full--and in any one or more subsequent series of instructions--*particular instructions are separated, as may be required, by time periods when no instruction* that controls the microcomputer, 205, of any station *is transmitted* which periods allow sufficient time for the microcomputer, 205, of each and every subscriber station *to complete functions* controlled by previously transmitted instructions and commence waiting for a subsequent instruction, in a waiting fashion well known in the art, before receiving a *subsequent instruction*.

(Spec. at 22 ll. 9-18)(emphasis added).

*... an instruction ... causes* subscriber station apparatus to execute a combining operation in *synchronization ....*

(Spec. at 26 ll. 21-22)(emphasis added).

In addition, personalized programming is displayed *only when* it is of specific relevance to the conventional television programming of said combined medium. In the example, each subscriber views a graphic presentation of his own portfolio performance information *as soon as* it becomes specifically relevant to graphic information of the performance of the market as a whole. Prior to its time of specific relevance, no personalized information is displayed (despite the fact that said graphic information of the performance of the market as a whole is displayed). And said personalized information is displayed *only for so long as* it remains specifically relevant. *As soon as* its specific relevance terminates, its display terminates.

(Spec. at 27 ll. 21-33)(emphasis added).

In the "One Combined Medium" section, Applicants demarcate a critical type of instruction with a definition.

Hereinafter, an instruction ... that causes subscriber station apparatus to execute a combining operation ... is called a "combining synch command."

(Spec. at 26 ll. 20-23)(emphasis added).

Furthermore, in "One Combined Medium," Applicants teach a temporal relationship of combining synch commands that have specific functionalities. A *first combining synch command*, (See Spec. at 24 ll. 5-27 and p. 26 ll. 23-28), causes the local image—Fig. 1A—to be provided at the subscriber station. A *second combining synch command*, (See Spec. at 26 ll. 1-8 and 20-23), causes display of the combined image—Fig 1C. (Furthermore, a *third combining synch command*, (See Spec. at 27 ll. 3-7), terminates display of the combined image.) In their step-by-step teachings,

Applicants *provide clear contextual pertinence of subsequent teachings by making explicit reference to* the “One Combined Medium” disclosure, and especially by *establishing the temporal relationships of subsequent teachings to the Fig.1C* combining and the functionalities provided by these combining synch commands.

(b) **“The Signal Processor” through “The Normal Transmission Location” (pages 28-86) and “The Preferred Configuration of Controller, 39, and SPAM-Controller, 205C.” (pages 156-162)**

In the specification at pages 28-86 and pages 156-162, Applicants teach apparatus and signaling techniques that are *used throughout the remainder of Applicants’ disclosure*. Applicants teach Signal Processor, (Spec. at 28-34 and Fig.1); Signal Decoder, (Spec. at 34-38 and Figs.2A-2C); and Signal Processor System, (Fig.2D), apparatus. *Applicants also teach in detail the controller* (Spec. at 156-162 and Fig.3A) *apparatus of Signal Decoders* (e.g., controller, 39, in Fig. 2A). Applicants teach signaling techniques in sections entitled “The Composition of Signal Information ... Commands, Information Segments, and Padding Bits,” (Spec. at 43-49), The Organization of Message Streams ... Messages, Cadence Information, and End of File Signals,” (Spec. at 59-69), “Detecting End of File Signals,” (Spec. at 69-84), and “The Normal Transmission Location,” (Spec. at 84-86).

(c) **“Operating Signal Processor Systems ... Introduction” through “Operating Signal Processor Systems ... Signal Record Transfer” (pages 86-278)**

At specification pages 86-278, Applicants teach methods of operating the signal processing apparatus of pages 28-86 and 156-162 explicitly within the context of the “One Combined Medium” disclosure. For example:

Five examples illustrate methods of operating signal processing system apparatus. Each focuses on subscriber stations where the signal processor system of Fig. 2D and *the combined medium apparatus of Fig. 1* share apparatus and operate in common. Fig. 3 shows one such subscriber station.

(Spec. at 86 l. 32 through p. 87 l. 2)(emphasis added).

All five examples describe signal processing variations that relate to *the Fig. 1C combining of "One Combined Medium."*

(Spec. 87 ll. 30-32)(emphasis added).

Each example focuses on the processing of the three signal messages of the *Fig. 1C combining*. The information of said messages include three combining synch commands and one program instruction set. The first message is of the information associated with the *first combining synch command*. Said first command has a "01" header, an execution segment, and a meter-monitor segment of six fields. Said command is followed by an information segment that contains said program instruction set, and said information segment is followed by an end of file signal. Said first command addresses URS microcomputers, 205, and causes said computers, 205, to load and run the program instruction set transmitted in the information segment.

(Spec. at 89 ll. 3-16)(emphasis added).

The second message is of the information associated with the *second combining synch command*.

(Spec. at 90 ll. 4-5)(emphasis added).

The third message is of the information associated with the *third combining synch command*.

(Spec. at 90 ll. 28-29)(emphasis added).

Repeatedly throughout each of the five examples, reference is made to pertinent "One Combined Medium" disclosures. For example, in Example #1, (Spec. at 93-143), Applicants state:

#### OPERATING SIGNAL PROCESSOR SYSTEMS ... EXAMPLE #1.

The first example elaborates on the Fig. 1C combining described above in "One Combined Medium" and focuses on the operation of decoder, 203, SPAM-controller, 205C, and microcomputer, 205, on the execution of controlled functions, and on the the use of cadence information to organize signal processing. The example begins as divider, 4, starts to transfer to decoder, 203, in its outputted composite video transmission, the embedded binary information of the first message.

(Spec. at 93 ll. 20-29.)

As described in "One Combined Medium" above, loading and running said program instruction set causes microcomputer, 205, (and URS microcomputers, 205, at other subscriber stations) to place appropriate Fig. 1A image information at particular video RAM.

(Spec. at 107 ll. 20-24.)

In the foregoing fashion and as described in "One Combined Medium" above, said transferred information of the second combining synch command causes microcomputer, 205, to combine the programming of Fig. 1A and of Fig. 1B and transmit said combined programming to monitor, 202M, where Fig. 1C is displayed.

(Spec. at 125 l. 31 through p. 126 l. 1.)

Fig. 3 (which is the combination of the apparatus of Figs. 1 and 2D (*See* Spec. at 86 l. 32 *et seq.*)) and Fig. 3A (the controller in the decoders 30 and 203 in Fig. 3, (*See* Spec. at 156 l. 18 *et seq.*)) depict the receiver station at which all five examples occur. Example #1 discloses in detail transfer of SPAM messages to addressed apparatus at the receiver station as well as the execution of controlled functions in response to the messages. Example #2 discloses selective decryption of content of the SPAM message stream at decryptor 10 of signal processor 200. Example #3 discloses the creation of signal records at signal processor 200 based on monitoring information contained in the message stream that delivers the Fig. 1C image. Example #4 discloses functioning of the Fig. 3A controller 39 in decoder 203, including selective decryption at decryptor 39K and additional processing of the message stream content to create signal records. Example #5 discloses the functioning of signal processor 200 components (e.g., 6, 1, 2, 3, 30 and 40) to gather data on the availability of programming (see, for example, page 269 line 6).

Pages of the specification 271-278, state: "In examples #3, #4, and #5, the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station computers," (Spec. at 271 l. 33 *et seq.*) and teach this process in detail.

**(d) “Regulating the Reception and Use of Programming ... including Example #6” and “... Example #7” (pages 278-312) as well as “... More on Example #7 ... Combining ... Automatically to the Computer System ...” (pages 427-447)**

At pages 278-312 of the specification, Applicants teach methods of governing the reception and use of programming and relate to, for example, “digital ... television transmissions,” (See Spec. at 279 l. 14). Example #6 discloses a variant of the type of decryption techniques disclosed in examples #2 and #4 to regulate the use of control signal, in particular. Focusing on the receiver station of Fig. 4, (See Spec. at 286 l. 6 through p. 288 l. 20), example #7 discloses a multistage process of selectively decrypting digital components (video and audio) of a “television signal,” (See Spec. at 288 ll. 32-33). The multistage process includes selective transfer, *e.g.*, by tuning or switching, (Spec. at 295 ll. 6-30). At pages 427-447, additional regulating concepts are taught which are variants to the disclosure of pages 287-312, and which rely on disclosures (*e.g.*, intermediate transmitter station automation, (Spec. at 324-390)) which occur in the specification between pages 312 and 427.

Just like every one of examples #1-#5, examples #6 and #7 (Spec. at 287-312 and 427-447) are disclosed within the context of the “Wall Street Week” program. With respect to example #6, see, for example, page 281 lines 7-9. With respect to example #7, see, for example, page 289 lines 12-27 and page 429 lines 26-33. The examples also disclosed functionally and temporally with respect to earlier disclosures such as in “One Combined Medium” at pages 19-28 (*e.g.*, Spec. at 311 ll. 10-16 and p. 447 ll. 8-14).

**(e) “Monitoring Receiver Station Reception and Operation” (pages 312-324)**

At pages 312-324 of the specification, Applicants teach methods of monitoring the reception and operation of a receiver station using Fig. 5. Fig. 5 shows an extended system of monitoring decoder, controlled by signal processor 200, each monitoring an associated device and communicating monitor information to signal processor 200. This

disclosure is also set within the context of the “Wall Street Week” program (*See* Spec. at 322 ll. 26-27), references Fig.1B (Spec. at 322 l. 35), and cites previously defined portions of example #3, which concern monitoring (*see* Spec. at 322 ll. 30-35, p. 174 ll. 21-23, and p. 190 ll. 14-16).

(f) **“Automating Intermediate Transmission Stations”  
(pages 324-390) including “Example #8” (pages 340-354)**

At pages 324-390 of the specification, Applicants teach automation of intermediate stations. The teachings relate to forms of programming that include, but are not limited to, television, radio, and data and that apply to all manner of broadcast and cablecast operations (*see* Spec. at 324 ll. 11-17, p. 339 l. 9 through p. 340 l. 10, and p. 389 l. 14 through p. 390 l. 11). Figs. 6A-B illustrate Applicants’ teachings in the setting of a cable television system. Generally speaking, apparatus of Figs. 6A-B are described at page 324 line 18 through page 328 line 17 and page 337 lines 1-24, and the basic methods of operation of the station (e.g., operating according to a complete programming schedule) are disclosed at page 325 line 17 through page 326 line 18 and page 328 line 8 through page 331 line 16. Organizing units of prerecorded programming (e.g., to play according to schedule) is disclosed at page 331 line 17 through page 334 line 6. Playing according to schedule is disclosed at page 334 line 7 through page 336 line 35. Monitoring station operations is disclosed, *inter alia*, (e.g., to provide auditable proof-of-performance) at page 337 line 25 through page 339 line 8. In their teachings of organizing, playing and monitoring, Applicants introduce exemplary programming, including **program unit Q** which is a specific focus of later disclosures in Applicants’ specification. Applicants teach the subject matter of pages 324-390 following pages 86-324 to make clear that the earlier teachings apply at intermediate transmission stations as well as end user stations, (e.g., Spec. at 339 l. 29 through p. 340 l. 10 and p. 389 l. 31 through p. 390 l. 11).



In example #8, Applicants teach a distribution station, such as a satellite uplink, which transmits control signals and units of programming, such as television spot commercials, to a plurality of automated intermediate transmission stations as taught at pages 324-340 (Spec. at 340 l. 13 through p. 345 l. 28). The intermediate transmission stations receive the control signals, (e.g., Spec. at 342 l. 18 through p. 343 l. 17 and p. 344 ll. 28-32), and the programming, and store and retransmit selected exemplary television spot commercials – **most focally program unit Q**, (e.g., Spec. at 343 ll. 5-17, p. 351 l. 27 through p. 352 l. 30, and p. 353 ll. 6-28), with each intermediate station operating independently and retransmitting its selected exemplary commercial(s) at different times and in different channels (Spec. at 343 l. 5 through p. 344 l. 22 and p. 345 l. 29 through p. 354 l. 3). The intermediate stations automatically retain and communicate proof-of-performance records to one or more remote auditing stations, (see Spec. at 341 ll. 11-15 and p. 352 l. 18 through p. 354 l. 3).

(g) **Examples #9 and #10 (pages 354-390 & 469-516):  
“Automating Intermediate ... Station Combined  
Medium Operations” (pages 354-374 of Example #9)  
and “Network Control of Intermediate Generating and  
Embedding” (pages 374-390 of Example #10)**

In examples #9 and #10, at pages 354-374 of the specification for example #9 and pages 374-390 for example #10, Applicants teach automation of an intermediate station in creation and transmission of combined medium programming (“of the same sort as ‘Wall Street Week’” at page 355 lines 1-2). At pages 469-516, Applicants teach the corresponding operations of a plurality of end user stations to which the intermediate station transmits the programming so created. Both examples focus on **Program unit Q** (see Spec. at 354 l. 35 through p. 355 l. 14, p. 374 l. 29 through p. 375 l. 12, p. 469 ll. 1-2, and p. 478 ll. 23-26). In each example, Applicants teach a sequence of messages and **carefully name each message in the sequence with a name that ties together the transmitter functions of pages 354-390 and the corresponding end user station**

**functions of pages 469-516 unambiguously.** (Appendix D, a Glossary of Defined Terms, is included herewith identifying certain terms and defined by their use in the instant specification.) For example, the “program-instruction-set message (#9)” is defined at page 371 lines 17-19 and transmitted at page 372 lines 4-6; the “program-instruction-set message (#10)” is defined at page 385 lines 14-16 and transmitted at page 386 lines 12-14; the “program-instruction-set message (#10)” is received at the end user station(s) at page 484 lines 5-14; and at page 514 lines 8-13, 17 and 23-24 Applicants teach that the “program-instruction-set message (#9)” “[causes] the same functioning” at the end user station(s) as the “program-instruction-set message (#10)”. Some of the other messages in the sequence are named at page 372 lines 20-35, page 387 lines 19-31, page 490 lines 24-34, page 492 lines 1-11, page 495 lines 1-10, etc., and page 514 lines 8-31.

At pages 354-374 in example #9, Applicants teach local **origination**, (Spec. at 374 l. 6 and p. 368 ll. 3-4), of combined medium programming at an automated transmitter station (which is also an intermediate transmission station). **Program unit Q**, which is delivered to and handled at the intermediate station according to the teachings of pages 324-354, (Spec. at 355 ll. 15-17), is disclosed as television-based combined medium programming, (Spec. at 354 l. 35 through p. 355 l. 14), that contains embedded signals, (e.g., Spec. at 356 l. 9 through p. 358 l. 21, p. 367 ll. 30-33, p. 369 ll. 4-6, and p. 372 ll. 22-35). As one example of the creation of programming, at pages 359 line 14 through page 365 line 21, Applicants teach automation of the intermediate station to create a set of instructions (called “PROGRAM.EXE” at page 365 line 8 and defined as the “program-instruction-set of Q” at page 365 lines 18-21) and to transmit the instructions, (Spec. at 371 l. 11 through p. 372 l. 6), in a “program-instruction-set message,” (Spec. at 371 ll. 17-19 and p. 372 ll. 4-6).

At pages 374-390 in example #10, Applicants teach **network origination** (Spec. at 374 ll. 20-31) of combined medium programming and focus especially on the creation of programing *in the network* at automated intermediate stations as well as at an

origination station. **Program unit Q** in example #10 is the same program unit Q as in example #10 (Spec. at 375 ll. 7-8). In example #10 Applicants disclose the same creation of programming as in example #9. For example, page 377 line 4 through page 382 line 14 corresponds to page 358 line 26 through page 366 line 18; "PROGRAM.EXE" appears at page 379 line 24, page 380 line 18, and page 382 line 3; definitions of the "program-instruction-set of Q.1" and "program-instruction-set of Q.2" occur at page 378 lines 23-28 and at page 380 lines 20-24 respectively; and generated instructions are transmitted at page 385 line 9 through page 386 line 14 in a "program-instruction-set message." But in contrast to example #9 which focuses on origination at just one transmitter station, in example #10 Applicants teach a plurality of automated intermediate station operating in parallel under control of a network origination station to generate and transmit control instructions messages (*see* Spec. at 59 ll. 29-33) to different end user stations. Furthermore, Applicants teach that the control instructions differ from each other (e.g., the PROGRAM.EXE files in the messages (Spec. at 484 ll. 9-10 and 17-18) differ (Spec. at 379 ll. 5-31 and p. 380 ll. 7-20)).

The end user station functionalities of examples #9 and #10 are disclosed at pages 469-516. Applicants teach a series of combined medium outputs (*e.g.*, Spec. at 491 ll. 10-16 and p. 506 ll. 17-21) in response to the transmitted control instructions or "messages" (Spec. at 484 ll. 5-18, p. 485 ll. 14-18, p. 490 l. 24 through p. 491 l. 16, and p. 505 l. 32 through p. 506 l. 21). Furthermore, the information outputted in the combined medium outputs differs from end user station end user station (Spec. at 491 ll. 10-29 and p. 506 ll. 17-31). Applicants also teach in examples #9 and #10 *other functionalities, such a viewer interactivity and interactivity with stations remote from the end user stations*, that are discussed more fully below.

**(h) Automating Ultimate Receiver Stations (pages 390-427)  
... Regulating Station Environment (pages 396-406) ...  
Coordinating a Stereo Simulcast (pages 406-419) ...  
Receiving Selected Programming (419-427)**

Focusing on Fig. 7, Applicants teach, at pages 390-396 of the specification, apparatus and functionalities of an end user station including computing, signal processing (e.g. Figs. 2-2D), switching, decrypting, etc., in addition to receivers, storage devices, and various speaker and display devices. On page 396 is additional disclosure associated with the preferred controller, 39, taught at pages 156-162. At pages 396-406, Applicants disclosure concepts associated with broadcast/cablecast control of end receiver station heating/cooling and mechanical systems as well as interactivity associated with, for example, utilities meter reading. At pages 406-419, Applicants teach coordinating separate systems under broadcast/cablecast control – in this case, controlling devices associated with television and radio to present a stereo simulcast – as well as monitoring the devices in order to provide records of the performance of the stereo simulcast and of other presentations at the end user station to a remote data collection station. At pages 419-427, Applicants teach storing identifiers (e.g., of the stocks in a stock portfolio) and controlling the receiver station (e.g., tuning cable converter 222 at page 423 lines 11-13) to receive identified news at to process the news (e.g., Spec. at 425 ll. 30-34) according to pre-entered instructions of a user.

**(i) More Disclosure in the Context of “Wall Street Week”  
(pages 427-469)**

Having taught basic concepts of apparatus and automation of ultimate receiver stations, Applicants teach more advanced concepts within the context of “Wall Street Week” and its many attendant earlier teachings. Applicants’ objective, in so doing, is to teach how the various teachings, attendant to “Wall Street Week”, *relate to each other*.

**(j) More on Example #7 (pages 427-447)**

At pages 427-447 of the specification, Applicants elaborate on the earlier “Regulating Systems” (Spec. at 288 l. 22) teachings of example #7 (Spec at 288-312), which are summarized in section (d) above. Applicants teach the network described in “One Combined Medium” (Spec. at 20 l. 28 through p. 21 l. 4) as a **self structuring, parallel processing computing system**. This teaching follows Applicants teaching of “Automating Intermediate Transmission Stations” (Spec. at 324 l. 7 and pp. 324-390) in order to **elaborate on intermediate transmission station** (*e.g.*, see references to Fig. 6 at page 429 line 29 and page 325 lines 15-16) **automation** within the context of example #7 (*e.g.*, Spec. at 429 l. 26 through p. 435 l. 15) and the teachings attendant to “Wall Street Week” generally. Applicants teach the selective processing of incoming programming in accordance pre-stored “program-unit-of-interest information” (*e.g.*, Spec. at 428 ll. 21-26) that enables different viewer stations to handle differently (*e.g.*, store/display, automatically authorize purchase of) the “Wall Street Week” programming. Applicants teach storage of programming (Spec. at 445 ll. 27-32) that includes (*e.g.*, Fig. 1C) the locally provided information (*e.g.*, Fig. 1A) combined with the remotely supplied information (*e.g.*, Fig. 1B).

**(k) Controlling Combined Medium Operations (pages 447-457)**

At pages 447-457 of the specification, Applicants teach the functioning of “One Combined Medium” (Spec. at 19-28) within the context (*e.g.*, Spec. at 451 ll. 1-3) of functions that (i) precede (Spec. at 447 l. 26 through p. 451 l. 11) the beginning of the “One Combined Medium” programming (*i.e.*, “Wall Street Week”) and (ii) follow (Spec. at 451 l. 4 through p. 457 l. 10) the display of Fig. 1C. Applicants teach **providing and updating viewer data (*e.g.*, stock portfolio data) before the start of**, for example, “Wall Street Week” and controlling viewer stations to generate and combine into the “One Combined Medium” programming **a series of local images with each image combined**

**within its specific time interval of relevance. Applicants also teach error correction techniques for controlling viewer station computers that function incorrectly or inefficiently.**

**(l) Transmitting Program Instructions Sets (pages 457-463)**

Having taught generation of more than one image, inefficiency, and error correction, Applicants teach methods, at pages 457-463, for timely provision of software for controlling the generating and combining of local images (e.g., Fig. 1A) into the "One Combined Medium" programming. These include varying size of the bandwidth in which the software is located, as well as the location(s) and the timing pattern(s) in which the software is transmitted.

**(m) Audio Overlays and Other Overlays (pages 463-468)**

Focusing on Fig. 7D, Applicants teach a radio combined medium at pages 464-466 of the specification, including local selection at a radio receiver station of user specific audio and insertion of the selected audio into radio programming supplied from a remote radio transmitter. Applicants teach a broadcast print combined medium at pages 466-468, including local selection at a broadcast print receiver station of user specific text and insertion of the selected text into broadcast print programming supplied from a remote transmitter. Focusing on Fig. 7E, Applicants teach at page 468 a television combined medium that includes customized audio as well as customized video.

**(n) Examples #9 and #10 Continued – Viewer/Listener Station Functionalities (pages 469-516)**

To teach the viewer/listener station processing of **program unit Q** in examples #9 and #10 (*see* section (g) above), Applicants focus on the "ultimate receiver station" (defined at page 40 line 35 through page 41 line 1) of Fig. 7 (e.g., Spec. at 390 ll. 30-31 and p. 470 l. 9). Having taught the concepts summarized in section (m) above,

Applicants can teach receiver stations interconnecting “apparatus ... in the fashion of Fig. 7E” (Spec. at 480 ll. 16-17). In this environment, Applicants teach local interactions (e.g., by humans at page 471 lines 6-18 and page 508 line 19 through page 509 line, and by equipment at, for example, page 484 lines 7-18 and page 509 line 35 through page 511 line 22) result in interaction between local station and remote station equipment (*see* Spec. at 509 l. 35 through p. 510 l. 4). Drawing on virtually every previous teaching, Applicants disclose at pages 469-516 generation of a series of outputs (e.g., Spec. at 485 ll. 14-18) that include video (e.g., Spec. at 491 ll. 10-29), audio (Spec. at 491 l. 30 through p. 493 l. 22), and print (Spec. at 496 l. 3 through p. 499 l. 3). Applicants also disclose error correction, as summarized in the section above, at page 514 line 32 through page 516 line 13. Furthermore, Applicants disclose at page 514 lines 8-31 that the viewer/listener stations perform substantively identically in examples #9 and #10.

**(o) Preprogramming Receiver Station Operating Systems  
(pages 516-532) and The Preferred SPAM Header  
(pages 532-533)**

At pages 516-532 of the specification, Applicants teach one master control station (e.g., Spec. at 518 ll. 17-26) transmitting operating system instructions to and programming transmitter and receiver station widely dispersed over a geographic area with the operating systems. Each station to be programmed selects those operating system instructions that apply to its particular type and version of reprogrammable device(s) (e.g., Spec. at 522-524), routes the instructions to memory of the reprogrammable device(s), and commences operating under control of the operating system instructions. At pages 532-533, Applicants further focus on the desirability of flexibility for system expansion and teach that the preferred SPAM header is one byte in length.

**(p) The General Case ... Summary Example #11 (pages 533-557)**

While Applicants could summarize their disclosure by simply stating that each method and feature of their disclosed "unified system" (Spec. at 533 l. 24) could be combined with every other method and feature (on its face an apparent tautology), they choose, instead, to provide one final example which explicitly relies on the entirety of foregoing disclosure. In example #11, programming is distributed in a time cycling fashion (*e.g.*, Spec. at 536 l. 11 *et seq.* and p. 556 ll. 12-14) from a European master control station via satellite (Spec. at 536 ll. 4-6) to national intermediate transmission stations (Spec. at 534 ll. 26-31) which transmit to local intermediate transmission station (Spec. at 535 ll. 18-22) which, in turn, transmit to ultimate receiver stations (Spec. at 534 ll. 1-4) where programming is displayed (*e.g.*, Spec. at 552 ll. 20-30) and information is communicated responsively (*e.g.*, Spec. at 555 ll. 14-29) back to the European master control station and the national and local intermediate stations (Spec. at 555 l. 26 through p. 556 l. 9).

The European master control station controls the national intermediate stations (*e.g.*, Spec. at 541 l. 29 through p. 542 l. 2 and p. 543 ll. 20-29) to control the local intermediate stations (*e.g.*, Spec. at 544 l. 23 through p. 545 l. 11) to control the ultimate receiver stations (*e.g.*, Spec. at 547 ll. 19-26 and p. 548 ll. 1-6). User specific information is generated at each ultimate receiver station (*e.g.*, Spec. at 548 ll. 18-22 and p. 550 ll. 30-31), stored at each ultimate receiver station (*e.g.*, Spec. at 551 ll. 11-14), explained in combined medium output (Spec. at 552 ll. 17-30), and communicated to the European master control station and the national and local intermediate stations (Spec. at 555 l. 26 through p. 556 l. 9). At points in the disclosed example #11 cycle where functions are described in general, reference is made to earlier sections of the specification that teach the detail of how the function is performed. For example, at page 537 lines 6-17, the European master control station is explicitly disclosed as preprogramming the national



and local intermediate stations and the ultimate receiver stations in the fashion summarized in the above section.

**(q) Conclusion**

As demonstrated above, within the specification, many embodiments of the claimed invention are disclosed. Each manifestation of an apparatus or method that includes the subject matter defined by the instant claims is a *single* embodiment of Applicants' invention. Such a single embodiment of Applicants' invention may have elements or steps that are described in detail in various separate sections of the instant specification. Every embodiment of the instant invention that is described by the specification as a whole is a *single* embodiment of the instant invention that provides support under the written description requirement.

It appears, however, that what the Examiner intends to request is that Applicants provide support for every limitation of an individual claim from within a single one of the detailed enumerated examples listed in the specification. In other words, the Examiner requests that the support provided for all the limitations of an individual claim be contiguous or proximate within *only a portion* of the specification, rather than the specification as a whole. The written description requirement of 35 U.S.C. § 112 does not mandate such contiguous or proximate descriptions of each element or step of every individual claim.

"To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that the 'inventor invented the claimed invention.'" *Regents of University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 43 U.S.P.Q.2d 1398, 1404 (Fed. Cir. 1997)(quoting *Lockwood v. American Airlines*, 107 F.3d 1565, 41 U.S.P.Q.2d 1398, 1405 (Fed. Cir. 1997)). Applicants submit that one of ordinary skill in the art would determine that the inventors possessed the claimed invention by recognizing that the embodiments

indicated in Appendix A are described in the specification. Since, for the reasons discussed above, one of ordinary skill in the art would recognize that the specification is a single cohesive document containing many descriptions of methods and apparatus included in general integrated systems, there is no reason that the entire support for each individual claim must come from within a single detailed enumerated example described in the specification. However in order to advance the prosecution of the instant application, Applicants have selected embodiments for inclusion in Appendix A that include elements and steps described primarily in a single enumerated example of the specification.

**(r) The Subject Matter in the '81 Disclosure is Specifically Included In the Instant Specification**

Applicants recognize that they must convey that they were in possession of the invention as of the effective filing date of November 3, 1981. Applicants also recognize that the claim of priority under 35 U.S.C. § 120 requires that the previously filed application disclose the invention in the manner provided by the first paragraph of 35 U.S.C. § 112. Accordingly, throughout the prosecution of the pending claims, Applicants have provided support based on the application filed November 3, 1981. Applicants also submit herewith, in Appendix A, support for each claim limitation from the application filed November 3, 1981. Applicants respectfully submit that the detailed support provided in Appendix A demonstrates full compliance with the written description requirement of 35 U.S.C. § 112, first paragraph, and the related requirement of 35 U.S.C. § 120. Additionally, Applicants submit Appendix C herewith, to provide a correlation between the 1981 priority specification (as referenced the column and line numbers of Applicants' U.S. Pat. No. 4,694,490) and the instant specification, and Appendix D containing a Glossary of Defined Terms with respect to the instant specification.

In the Office Action at page 5, the Examiner seeks an explanation for how the '81 disclosure can be considered the specification support. The subject matter in the '81

disclosure is clearly included in the instant specification as demonstrated by Appendix C. Applicants respectfully assert that one skilled in the art, upon recognizing a description of the invention in the '81 disclosure, would readily recognize a description of the invention in the instant specification. The Examiner merely states at page 3 of the Office Action that the previously provided support does not cite the sentences, paragraphs, or passages of the instant specification. Applicants submit that the support provided in Appendix A demonstrates that the instant specification describes the subject matter that is originally disclosed in the '81 application and is presently claimed.

Applicants clarify that the instant specification does not include a verbatim duplication of the '81 disclosure. However, Applicants maintain that the subject matter in the '81 disclosure is specifically included in the instant specification. Neither 35 U.S.C. § 112 nor 35 U.S.C. § 120 requires that the parent application be incorporated into the pending application either by reference or by verbatim repetition. "In order to determine whether a prior application meets the 'written description' requirement with respect to later-filed claims, the prior application need not describe the claimed subject matter in exactly the same terms as used in the claims; it must simply indicate to persons skilled in the art that as of the earlier date the applicant had invented the what is now claimed." *Eiselstein v. Frank*, 52 F.3d 1035, 34 U.S.P.Q.2d 1467, 1470 (Fed. Cir. 1995)(citation omitted)(quoting *Vas-Cath v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111, 1116 (Fed. Cir. 1991)). Applicants respectfully submit that the support cited in Appendix A demonstrates that the '81 disclosure indicates to persons skilled in the art that as of November 3, 1981, Applicants had invented what is now claimed.

**(3) 35 U.S.C. § 112 Includes No Requirement That Identical Embodiments of the Invention be Described in Both a Parent Application and a Subsequent Application Claiming Priority Therefrom**

As discussed above, there are many embodiments of the claimed invention disclosed in the specification in such full, clear, concise, and exact terms that one skilled in the art would clearly conclude that Applicants invented the claimed invention as of the effective filing date of the application. There is no conflict or discrepancy for Applicants to refer to one embodiment at one point during the prosecution of the instant application and to refer to another embodiment at a different point. Applicants may independently rely on various embodiments of the claimed invention to demonstrate support under the written description requirement. Likewise, there is no requirement in either 35 U.S.C. § 112 or 35 U.S.C. § 120 that identical embodiments of the invention be described in both a parent application and subsequent application claiming priority therefrom. As noted above, “the prior application need not describe the claimed subject matter in exactly the same terms as used in the claims; it must simply indicate to persons skilled in the art that as of the earlier date the applicant had invented the what is now claimed.” *Eiselstein v. Frank*, 52 F.3d 1035, 34 U.S.P.Q.2d 1467, 1470 (Fed. Cir. 1995)(citation omitted)(quoting *Vas-Cath v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111, 1116 (Fed. Cir. 1991)). “[I]psis verbis disclosure is not necessary to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question.” *Fujikawa v. Wattonasin*, 39 U.S.P.Q.2d 1895, 1904 (Fed. Cir. 1996)(quoting *In re Edwards*, 568 F.2d 1349, 1351-52, 196 U.S.P.Q. 465, 467 (C.C.P.A. 1978)). Applicants may rely on different embodiments at different times to show that the disclosure conveys to those skilled in the art that Applicants had possession of the claimed subject matter. Applicants respectfully submit that such use of multiple embodiments is permissible to demonstrate compliance with the written description

requirement of 35 U.S.C. § 112. However, where clarity permits, Applicants have selected similar embodiments from both the '81 disclosure and the instant specification for inclusion in Appendix A to demonstrate compliance with the written description requirement.

**(4) Conclusion**

The Examiner has failed to establish a *prima facie* rejection under the written description requirement of 35 U.S.C. § 112, first paragraph, because no reasons are given as to why one skilled in the art would not consider the description sufficient. The Examiner also asserts that there is a lack of continuity between the disclosure in the application filed November 3, 1981 and the instant specification. Applicants maintain that, although the '81 disclosure is not included in identical words in the instant specification, the subject matter of the '81 disclosure is included in the instant specification. Furthermore to demonstrate support for the instant claims, submitted herewith, in Appendix A, are tables demonstrating support for each claim from both the '81 disclosure and the instant specification. In view of the above arguments and Appendices A, C & D, Applicants respectfully request that the rejection under the written description requirement of 35 U.S.C. § 112, first paragraph be withdrawn.

**b) The Specification Enables One Skilled in the Art to Make and Use the Invention**

The Examiner rejects claims 6-316 under the enablement requirement of 35 U.S.C. § 112, first paragraph. (Office Action at 5.) The Examiner concludes that the handling/transmission of "digital television signals" is not enabled by the specification. (Office Action at 161.) The Examiner also concludes that "data" could not be processed in the same manner as television and radio programming units. (Office Action at 168.) However, these conclusions are not directed specifically to the invention claimed by the presently pending claims.

The test for enablement is whether one reasonably skilled in the art could make or use the invention from the disclosure in the application coupled with information known in the art without undue experimentation. *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 U.S.P.Q.2d 1217, 1223 (Fed. Cir. 1988). The invention is defined by the claims presented in the instant application. The Examiner concludes that the terms "digital" and "data" are not enabled. The Examiner fails to consider how these terms define Applicants' invention in the instant claims. The Examiner has failed to include any analysis of whether any particular claim is supported by the disclosure. The PTO bears the initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by each claim is not adequately enabled by the description of the invention provided in the specification of the application. *In re Wright*, 999 F.2d 1557, 27 U.S.P.Q.2d 1510, 1513 (Fed. Cir. 1993) The Examiner has failed to consider the scope of protection provided by the claims in his analysis under the enablement requirement. Therefore, the Examiner has failed to establish a *prima facie* rejection under the enablement requirement of 35 U.S.C. § 112, first paragraph.

The Examiner suggests Applicants enumerate which claim trees are directed toward an '81 embodiment and which are directed toward an '87 embodiment. In Part a)(2)(r) above, Applicants have fully addressed this ground of rejection in the context of the written description requirement. Applicants maintain that each pending claim defines an invention that has embodiments described in both the application originally filed November 3, 1981, and the instant specification. The Examiner has failed to determine that one reasonably skilled in the art could not make or use the invention by the conclusion that the claims "seem to mix and match '81 and '87 disclosed embodiments." Therefore, the Examiner has failed to establish a proper rejection under the enablement requirement of 35 U.S.C. § 112, first paragraph.

**(1) "Digital" is Enabled by the Specification**

Claims 6-316 stand rejected under 35 U.S.C. § 112, first paragraph, because the Examiner alleges these claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. (Office Action at 161.) The Examiner asserts the specification fails to disclose the manner in which digital television signals are formatted and processed. The Examiner acknowledges that the transmission of digital television signals was known in the art. The rejection is based on the assertion that the transmission of digital television signals was not interchangeable with the transmission of analog television signals and the Examiner's conclusion that Applicants' disclosure assumes that they are interchangeable. This reasoning is an insufficient basis for the rejection of claims 6-316 for at least two reasons. First, the Examiner's discussion of the transmission and formatting of digital television signals is not directed to the scope of claims 6-316. Second, the means needed to format and transmit digital television signals in a manner compatible with all the methods and apparatus disclosed in the specification was known by those skilled in the art.

Claims 6-316 are fully enabled by the specification. Claim XXX is the only claim in the instant application that specifies "digital", i.e.,:

Claim 64, "digital television signal,"

Claim 84, "digital information transmission,"

Claim 86, "digital information transmission,"

Claim 91, "information channel comprising a digital information transmission,"

Claim 93, "digital information channel,"

Claim 184, "processing and outputting a digital television signal,"

Claim 190, "digital data embedded in a signal," and

Claim 192, "digital data embedded in a signal."

See Appendix A for specification support for claim 70.

Notwithstanding the above arguments, Applicants recognize that the invention defined by aforementioned claims is compatible with the use of digital television signals. The handling and transmission of digital television signals in a manner compatible with the methods described in the specification were well known to those skilled in the art as of the filing date of the instant application. The Examiner requests Applicants to submit references which show that the means needed to format and transmit "digital television signals" were known to those skilled in the art. Applicants submit that U.S. Patent No. 3,906,480 issued on September 16, 1975 to Schwartz et al. discloses the means needed to format and transmit "digital television signals" in a manner compatible with the methods described in the specification. Schwartz et al. discloses decomposing vectors to be displayed into elemental vector segments that are *encoded* as vector symbols. Schwartz et al. further discloses that the system has the capability of storing each vector in a compacted (i.e. compressed) form while retaining its attributes and identity in storage. Applicants contend that the specification discloses the usage of digital data in a television signal similar to that which is disclosed in Schwartz et al. The means needed to format and transmit digital television signals in this manner were well known to those skilled in the art as of the filing date of this application.

The Examiner has failed to construe the claims in his analysis under the enablement requirement. The Examiner directs his analysis to the term "digital television signals," but fails to demonstrate how this analysis applies to the above listed claims. Furthermore, means compatible with Applicants' disclosure of formatting and transmitting digital television signals were well known in the art, contrary to the Examiner's assertion. For at least these reasons, Applicants respectfully request the withdrawal of the rejection of claims under the enablement requirement of 35 U.S.C. § 112, first paragraph.



**(2) "Data" is Enabled by the Specification**

Claims 6-316 and all claims depending therefrom stand rejected under 35 U.S.C. § 112, first paragraph, because the Examiner alleges these claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. (Office Action at 168.) The Examiner notes that the specification discloses that SPAM messages can be embedded within the "normal locations" of "other media" such as broadcast data or print. The Examiner also notes that the specification discloses that print or data information is transmitted within SPAM messages. Applicants acknowledge the disclosure from line 6 of page 85 through line 11 of page 86 of the instant specification, which describes that SPAM signals may accompany conventional print or data programming. It is unclear to what specific disclosure the Examiner refers by the specific citations recited on pages 170-171, and in the footnote on page 170 of the Office Action. The Examiner asserts that these disclosures are so contradictory that one of ordinary skill in the art would need to resort to undue experimentation to practice the invention. (Office Action at 169.) Applicants firmly assert that a thorough reading of the specification shows that the disclosure is in no way contradictory with respect to the term "data."

Applicants disclose the use of SPAM signals to control and coordinate a wide variety of subscriber stations. (Spec. at 40.) The information of SPAM signals includes data, computer program instructions, and commands. (Spec. at 41 ll. 20-21.) One typical example of the composition of a SPAM signal is shown in Figure 2E. (Spec. at 44.) The specification clearly discloses that SPAM signals may included information segments. (Spec. at 44 l. 11.) Program instruction sets, intermediate generation sets, other computer information, and data may all be transmitted in information segments. (Spec. at 53 l. 34 through p. 54 l. 2.) Applicants disclose that SPAM signals can be embedded in many different locations in electronic transmissions. (Spec. at 85 ll. 6-7.) In broadcast and data

communications transmissions, SPAM signals can accompany conventional print or data programming in the conventional transmission stream. (Spec. at 85 ll. 20-23.) More precisely, the conventional print or data information may be transmitted in an information segment of a SPAM signal. (Spec. at 86 ll. 1-11.) Thus, SPAM signals can be included in broadcast print and data communication transmissions. Also, conventional data information can be transmitted in an information segment of a SPAM signal. There is no conflict in this disclosure. Any person skilled in the art would be enabled to use SPAM signals to control and coordinate a subscriber station through a broadcast data communication transmission by reading the instant specification. After thoroughly reading the specification any person skilled in the art would require no undue experimentation to practice Applicants' claimed invention.

The Examiner asserts that Applicants' disclosure did not describe a system or method which formatted, transmitted, received, processed, or displayed data program units under control of associated SPAM messages because data program units were actually transmitted with the SPAM messages. (Office Action at 171.) The Examiner extends this conclusion to hold that the disclosure fails to set forth the means or steps needed to make or use systems in which data is manipulated in the same manner as described for television and radio television program units. (Office Action at 172.) The Examiner's conclusion fails to follow from the stated facts. Data program units transmitted with SPAM signals can be manipulated under the control of the associated SPAM signal. The fact that data are disclosed as transmitted in the information segment of SPAM signals in no way conflicts with disclosed control of such transmissions through the use of the SPAM signals.

Furthermore, at most the Examiner's conclusion applies to data communication transmissions that are controlled through the use of SPAM signals accompanying data programming. However, the Examiner makes no attempt to construe the claims to determine how this rejection applies to the scope of each claim. Assuming *arguendo* that

the Examiner's reasoning is correct, every use of the term data does not violate the enablement requirement of 35 U.S.C. § 112. Applicants recognize that the pending claims set forth an invention that may be used with broadcast print or data communications transmissions. However, Applicants submit that the instant rejection does not directly apply to the following claim limitations:

Claim 6, "identification data," and "data designating a viewer interest,"

Claim 8, "identification data,"

Claim 9, "identification data,"

Claim 11, "transmitted data,"

Claim 12, "remote data," and "presentation of data,"

Claim 15, "detected data,"

Claim 25 "processing data," and "store data for subsequent processing,"

Claim 26 "identification data,"

Claim 30, "identification data," and "received data including timing data,"

Claim 31, "identification data,"

Claim 35, "transmitted data,"

Claim 39, "detecting data,"

Claim 40, "communicate data,"

Claim 51, "data that designate a time or a channel of transmission," "one or more data that specify the title of or some subject matter contained in a unit of mass medium programming or data associated with said instruct signal,"

Claim 83, "processing of data,"

Claim 89, "processing of data," "plurality of data including the datum of interest," and "datum of interest to the identification signals of each of the received data,"

Claim 90, "processing of data to present a local output," "received data that is of interest to the user," and "generating a local graphic by processing said stored selected at least said portion of said data,"

Claim 94, "coordinating the processing of data to present a local output," "comparing the received data to the stored identification information," and "storing said selected data,"

Claim 95, "coordinating the processing of data to present a local output" "detecting the data in the transmission" "selecting at least a portion of said detected data," and "generating a local graphic based on said stored selected data,"

Claim 96, "storing identification information identifying data of interest," "identifying one of said plurality of information channels containing the data" "the data of interest received on the identified channel," and "generating a local graphic based on said stored selected data,"

Claim 97, "receiver station of coordinating the processing of data," "storing identification information identifying data," "receiving a plurality of information channels, at least one of said channels containing data," "comparing the identification information to the data on each said scanned channel," "detecting the data of interest received on the identified channel," and "generating a local graphic based on said stored selected data,"

Claim 98, "receiver station of coordinating the processing of data and television programming to present a local output" "querying a remote data source," and "a plurality of data including the datum of interest from the remote data source, each of said plurality of data comprising an identification signal and an information signal,"

Claim 99, "providing data," "storing data," "receiving at said remote data source," "transmitting said data," and "to coordinate data processing with at least one of communication and presentation of television programming,"

Claim 103, "detecting one of data and an instruct signal in said information transmission,"

Claim 104, "coordinate data processing with at least one of communication and presentation of said television programming,"

Claim 108, "coordinating data processing with communication or presentation of television programming,"

Claim 112, "to coordinate data processing with at least one of communication and presentation of television programming,"

Claim 113, "coordinate data processing with at least one of communication and presentation of television programming and delivering the instruct signal to a transmitter,"

Claim 114, "identification data,"

Claim 168, "communicating data and update material to at least one mass medium programming receiver station," "store data for subsequent processing,"

Claim 190, "digital data,"

Claim 192, "digital data,"

Claim 235, "receiving first data and video programming,"

Claim 237 "receiving data to be processed for presentation in coordination with a mass medium programming output," and "outputting data for presentation with mass medium programming,"

Claim 248 "detecting one of data and an instruct signal," and "passing said detected one of said data and said instruct signal to said processor,"

Claim 262 "coordinating the processing of data and television programming at a receiver station to present a local output,"

Claim 266, "coordinating the processing of data and television programming at a receiver station to present a local output," and "generating locally pertinent information based on stored data,"

Claim 267, "providing data of interest to a receiver station from a remote data source," "storing data at said remote data source," "transmitting said data from said remote data source to said receiver station," and "transmitted data,"

Claim 271 "detected data," and

Claim 303, "one of said first instruct signal and identification data."

For at least the above reasons, Applicants submit that the subject matter defined by above listed claims is described in the specification in such a way to enable any person skilled the art to make or use Applicants' invention. Accordingly, Applicants respectfully request that the rejection of these claims be withdrawn.

**c) The Best Mode of Practicing the Claimed Invention  
Contemplated by Applicants is Disclosed in the Specification**

Claims 6-316 stand rejected under 35 U.S.C. § 112, first paragraph, because it is asserted that the best mode contemplated by the inventor has not been disclosed. (Office Action at 171.) The first paragraph of 35 U.S.C. § 112 provides that the specification "shall set forth the best mode contemplated by the inventor of carrying out his invention." A two step inquiry is used to determine if the best mode requirement is met. *Chemcast Corp. v. Arco Industries Corp.*, 913 F.2d 923, 16 U.S.P.Q.2d 1033,1036 (Fed. Cir. 1990). First, the Examiner must determine whether, at the time Applicants filed their patent application, they knew of a mode of practicing the claimed invention that they considered to be better than any other. *Id.* Second, the Examiner must determine whether the disclosure is adequate to enable one skilled in the art to practice the best mode, if one was known to Applicants. *Id.* This inquiry is designed to preclude applicants from concealing preferred embodiments of their inventions which they have conceived. *Id.* The Examiner has failed to apply this test in rejecting the pending claims under the best mode requirement. The Examiner has failed to present evidence that Applicants concealed any embodiment of their invention which they considered to be better than the embodiments disclosed in the instant specification. Therefore, Applicants respectfully request the withdrawal of the rejection of claims 6-316 under the best mode requirement of 35 U.S.C. § 112, first paragraph.

The Examiner compares the present case to *In re Ruschig*, 379 F.2d 990, 154 U.S.P.Q. 118 (C.C.P.A. 1967). The misapplication of *Ruschig* by the Examiner cannot

substitute for the two step inquiry to be applied under a proper best mode analysis. The reasoning applied in *Ruschig* is inapplicable to the best mode rejection made by the Examiner in the instant case. First, the issue in *Ruschig* was whether a claim was supported by the disclosure of the appellants' application. *Id.* 154 U.S.P.Q. at 119. The analysis in *Ruschig* by the United States Court of Customs and Patent Appeals does not address the best mode requirement. Second, the *Ruschig* analysis is inapplicable to the facts in the instant case. In *Ruschig*, a claimed specific species of a genus of chemical compounds was not named or identified by formula in the specification. *Id.* 154 U.S.P.Q. at 121. The issue was whether the disclosure of the genus along with teachings of a number of other species would lead one skilled in the art to the claimed species. The Court held that the disclosure in *Ruschig* failed to include guides directing the selections required to arrive at the claimed compound rather than any of the many other compounds that could also be made within the genus. *Id.* 154 U.S.P.Q. at 123. The Court employed the analogy of travel through a forest. The Court found that the appellants were pointing to trees, but that there were no blaze marks to single out the trees that led to the unnamed compound. *Id.* 154 U.S.P.Q. at 122. The facts in *Ruschig* are in direct contrast to the present case. In *Ruschig* the claim limitation was *not* named or identified in the specification. In the instant case the Examiner acknowledges that Applicants' disclosure addresses the variety of claim limitations included in the claims. (Office Action at 174.) As the claim limitations are addressed by the instant specification, no blaze marks are required to lead a skilled artisan through a forest of possibilities to find them.

The Examiner asserts that he cannot recognize the pending claimed processes within the "woods." (Office Action at 175.) In response, Applicants have provided detailed support for each claim limitation. Applicants find it disingenuous for the Examiner to now assert that somehow Applicants have erred by describing numerous specific claim limitation details (*i.e.* pointing to the trees that make up the Examiner's woods.)

The Examiner asserts that there is a scattering of teachings across the multiple applications in the chain of continuity of the ancestor applications relied upon by the claim of priority in the instant application. (Office Action at 174.) The Examiner concludes that this scattering constitutes either (1) concealment of the best mode, or (2) a failure to meet the written description requirement. For the reasons set forth above in Part a), Applicants have fully complied with the written description requirement. Also as explained above in Part a), there is no scattering of teachings across applications. The instant application is a proper continuation application of Application No. 096,096, filed September 11, 1987, which in turn is a proper continuation-in-part of Application No. 317,510, filed November 3, 1981. The instant disclosure is substantially identical to the disclosure of Application No. 096,096 (the '87 disclosure.) The instant disclosure includes substantially all the subject matter in the disclosure of Application No. 317,510 (the '81 disclosure) and adds considerable details and improvements to the methods and apparatus disclosed therein. There is no scattering of teachings across these disclosures as asserted by the Examiner.

The Examiner confusingly questions whether Applicants disclosed their best mode in relation to the terms "data," "pending claim processes as a whole," and "digital." In accordance with M.P.E.P. § 2165.03, the Examiner should assume that the best mode is disclosed unless there is evidence to the contrary. The Examiner points to no evidence indicating Applicants contemplated a best mode of carrying out the claimed invention that they have failed to disclose. That the Examiner questions whether the best mode is disclosed with respect to the "pending claim processes as a whole" is not evidence that Applicants concealed the best mode. With respect to the terms "data" and "digital," the Examiner has utterly failed to apply the first step of the proper best mode analysis. The Examiner has failed to determine that Applicants knew that one mode was better than another. Therefore, the Examiner has failed to establish a proper best mode rejection. Applicants note that this best mode rejection appears to be a repetition of the enablement



rejection, which asserts that no embodiment of Applicants invention claimed using the terms "data" or "digital" is adequately disclosed. The enablement rejection is fully addressed in Part b) above.

The Examiner has failed to apply the proper analysis in rejecting claims 6-316 under the best mode requirement of 35 U.S.C. § 112. The Examiner has failed to determine whether Applicants knew that one mode was better than another at the time the application was filed. Thus, the Examiner cannot determine whether the disclosure is adequate to enable one of ordinary skill in the art to practice the best mode. As the Examiner has failed to establish a proper rejection under the best mode requirement, Applicants respectfully request that these rejections under 35 U.S.C. § 112, first paragraph, be withdrawn.

**2. The Claims Comply With 35 U.S.C. § 112, second paragraph**

Claims 6-316 stand rejected under 35 U.S.C. § 112, second paragraph. (Office Action at 5 & 176.) The second paragraph of 35 U.S.C. § 112 mandates that the specification conclude with claims that meet two requirements. First, the claims must set forth the subject matter that Applicants regard as their invention. Second, the claims must be definite. The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. *In re Warmerdam*, 33 F.3d 1354, 31 U.S.P.Q.2d 1754, 1759 (Fed. Cir. 1994). When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Applicants submit that the Office Action fails to demonstrate that any claim is directed to subject matter that Applicants do not regard as their invention. The Office Action also fails to demonstrate that any claim fails to

reasonably apprise those of skill in the art of its scope. Applicants, therefore, respectfully request the withdrawal of these rejections under 35 U.S.C. § 112, second paragraph.

Claims 6-316 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is directed to the terms “programming” and “programming.” No further reasons are given to support this rejection. The Examiner utterly fails to indicate why any claim fails to reasonably apprise those of skill in the art of its scope. This rejection is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection and is therefore invalid under 35 U.S.C. § 132. Accordingly, Applicants respectfully request that this rejection be withdrawn. The claim language “programming” and is address below in Part b).

**a) The Claims Define That Which Applicants Regard as Their Invention**

Claims 6-316 stand rejected under 35 U.S.C. § 112, second paragraph, because the Examiner asserts that the claims fail to set forth the subject matter which Applicants regard as their invention. (Office Action at 176.) The Examiner requests “to remove all claim terms from pending claims when [their] conceptual meanings are not identical.” This logic is incorrect for the reasons given in Part 1.a)(2)(r) above, in which Applicants maintain that the subject matter in the ‘81 disclosure is specifically included in the instant specification.

Furthermore, the Examiner has merely pointed to evidence that Applicants believe that the claims are supported by the ‘81 disclosure. The conclusion that the claims fail to set forth subject matter which Applicants regard as their invention simply does not follow from the fact that Applicants believe that the claims are supported by the ‘81 disclosure. Applicants believe that the claims define an invention that is fully disclosed in both the ‘81 disclosure and the instant specification. The Examiner has failed to point to any evidence indicating that Applicants regard the invention to be something other than what is defined by the claims. As Applicants have consistently regarded the subject matter

defined by the instant claims to be their invention, Applicants respectfully request the withdrawal of this rejection of claims 6-316 under 35 U.S.C. § 112, second paragraph.

**b) There is no discrepancy in the use of the term  
"Programming"**

In considering claims, the Examiner suggests that the Applicants' use of the term "programming" in the pending claims is "repugnant to the normal/usual use of said terminology." (Office Action at 96.) The Examiner further suggests that, in the '81 disclosure (in the Parent Application No. 317,510 filed November 3, 1981), the Applicants defined the term "programming" as "everything transmitted over television or radio intended for communication of entertainment or to instruct or inform." The Examiner relies on the definition of programming set forth in the abstract of the disclosure. "The purpose of the Abstract is to enable the Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The abstract shall not be used for interpreting the scope of the claims." 37 C.F.R. § 1.72(b). By properly making reference to the whole specification, the Examiner will get a more complete understanding of Applicants' meaning of the term "programming".

"It is the object of this invention to unlock this potential [for a significant increase in the scope and scale of multi-media and multi-channel presentations] by the development of means and methods which permit progra[m]ming to communicate with equipment that is external to television and radio receivers, particularly computers and computer peripherals such as printers." "It is the further purpose of this invention to provide means and methods to process and monitor such transmissions and presentations at individual receiver sites and to control, in certain ways, the use of transmitted progra[m]ming and the operation of certain associated equipment. Such receiver sites may be stations or systems that intend to retransmit the progra[m]ming, or they may be end users of the progra[m]ming. The present invention contemplates that certain data may

be encrypted and that certain data collected from such processing and monitoring will automatically be transfer[r]ed to a remote geographic location or locations.” U.S. Patent No. 4,694,490, col. 1, ll. 22-24, 36-53.

Applicants contend that the definition of “programming”, to include television and radio entertainment information, computer programming and data to control execution of a processor, in the present application is clearly supported by the definition of the term “programming” in the ‘81 disclosure.

Applicants assert that their use of the term “programming” in the present application is both consistent with normal/usual usage and with the parent application. *Webster’s Seventh New Collegiate Dictionary* (1977) gives separate definitions for the noun and verb forms of “programming”. The noun form of “programming” is defined with a series of gerunds:

**“programming or programing ... n : the planning, scheduling, or performing of a program.”**

And the noun form of “program”, which includes the word “programming” in its definition, is:

**“program or programme ... n ... 1 ... : a public notice 2 a : a brief usu. printed outline of the order to be followed, of the feature or features to be presented, and the persons participating (as in a public exercise, performance, or entertainment) b : the performance of a program; esp : a performance broadcast on radio or television 3 : a plan or system under which action may be taken toward a goal 4 : CURRICULUM 5 : PROSPECTUS, SYLLABUS 6 a : a plan for the programming of a mechanism (as a computer) b : a sequence of coded instructions that can be inserted into a mechanism (as a computer) or that is part of an organism 7 : matter for programmed instruction”**

The verb form of “programming” is defined with the verb form of “program” and is:

**“program also programme vt -grammed or -gramed; -gramming or -graming 1 a : to arrange or furnish a program of or for : BILL b : to enter in a program 2 : to work out a sequence of operations to be**

performed by (a mechanism) : provide with a program 3 : to insert a program for (a particular action) into or as if into a mechanism”

Applicants assert that these definitions are entirely consistent with Applicants’ present and parent application. For example, the ‘81 disclosure describes a well known television program, “Wall Street Week”, at U.S. Patent No. 4,694,490 (hereinafter ‘490) col. 19 l. 5 through col. 20 l. 7. At ‘490 col. 19 l. 48-53 and col. 19 l. 63 through col. 20 l. 7, Applicants disclose a sequence of operations performed by a mechanism (a computer) which includes a first output (‘490 col. 19 l. 65 through col. 20 l. 2) and a second output (‘490 col. 20 l. 6). This sequence of operations is performed in response to “several instruction signals” (‘490 col. 19 l. 46) followed by “an instruction signal” (‘490 col. 19 l. 60). (That Applicants’ “signals” are coded is disclosed at ‘490 col. 11 lines 12-14 where a code reader passes the signals to a computer.) Applicants assert that these disclosed instruction signals (‘490 col. 19 l. 48-53 and 60-67) clearly meet the dictionary definition of a program--“a sequence of coded instructions that can be inserted into a mechanism (as a computer)”--and are, in fact, what is now, and was in 1981, widely known among those of considerably less than ordinary skill in the art as “a computer program” and as “computer programming”.

Applicants also assert that the first output (‘490 col. 19 l. 65 through col. 20 l. 2) and a second output (‘490 col. 20 l. 6), *by themselves*, also meet the dictionary definition of a program--“the performance of a program”. Furthermore, Applicants contend that they constitute both computer programming *and television programming*. Being generated and outputted by a computer qualifies them as computer programming. Being displayed as an integral part of a television program--“Wall Street Week” (‘490 col. 19 l. 45, 54-60, and col. 19 l. 67 through col. 20 l. 2)--qualifies them as television programming.

Finally, Applicants assert that this disclosure is in no way inconsistent with the meaning given to “programing” in the Abstract of Applicants’ parent disclosure--

"everything transmitted over television or radio intended for communication of entertainment or to instruct or inform." Applicants clearly disclose that the signals are "instruction signals embedded in the 'Wall Street Week' programing transmission" ('490 col. 19 l. 43-44) and that "These signals instruct" ('490 col. 19 l. 48) and "This signal instructs" ('490 col. 19 l. 64-65).

For the reasons set forth above, Applicants assert that the term "programming" as used throughout the instant application to include what are commonly known as television, radio and computer programming is clearly and unambiguously supported by the specification as filed and withdrawal of the corresponding rejection is respectfully requested.

**G. Response to Rejections under 35 U.S.C. § 102**

**1. Rejection under 102 (b) over Applicants' U.S. Pat. Nos. '490 & '725**

Claims 6-316 stand rejected under 35 U.S.C. § 102(b). The Examiner asserts that claims are clearly anticipated by Applicants' own U.S. Patent Nos. 4,694,490 and 4,704,725. (Office Action at 183.) The instant application claims the benefit under 35 U.S.C. § 120 of the filing date of both the previous applications that matured into the patents relied upon by the Examiner. Accordingly, neither of the patents relied upon by the Examiner is available as a reference under 35 U.S.C. § 102(b). The Examiner asserts that the instant specification fails to adequately support the instant claims. This assertion is incorrect and irrelevant to Applicants' claim of priority under 35 U.S.C. § 120.

Under 35 U.S.C. § 120, an application obtains the benefit of the filing date of a previously filed patent application if (a) the invention is disclosed in the manner provided by the first paragraph of section 112 in the previously filed application, (b) the application is filed by inventors named in the previously filed application, (c) the application is filed before the patenting or abandonment of or termination of proceedings

on an application similarly entitled to the benefit of the filing date of the first application, and (d) the application contains a specific reference to the earlier filed application. The instant application meets each of these requirements with respect to Applicants' previous Application No. 317,510 filed November 3, 1981. The Examiner acknowledges that Application No. 317,510, discloses the subject matter of the instant claims. The same inventors as filed the instant application filed application No. 317,510. The instant application was filed before the termination of proceedings of Application No. 113,329, filed August 30, 1993, (currently pending) which is similarly entitled to the benefit of the filing date of Application No. 317,510. The instant application contains a specific reference to the entire chain of Applicants' applications extending back to Application No. 317,510. As the instant application meets all the requirements of 35 U.S.C. § 120, the instant application is entitled the benefit of the effective filing date of November 3, 1981. Accordingly, neither U.S. Patent No. 4,694,490 nor No. 4,704,725 are available as prior art under 35 U.S.C. § 102(b) as neither was patented or published more than one year prior to November 3, 1981.

Furthermore, the Examiner asserts, "this rejection, under 35 U.S.C. § 102(b), is caused by Applicants choice to cite passages that did not exist in the original '87 C.I.P. disclosure." Applicants respectfully assert that the showing that the instant claims are supported by the '81 disclosure cannot form the basis for this rejection under 35 U.S.C. § 102(b). To the contrary, the showing establishes that the instant claims are entitled to an effective filing date of November 3, 1981. Additionally, Applicants assert that the instant claims are fully supported by the instant specification as discussed above in Part F.1.a) above.

For at least the above reasons, Applicants respectfully submit that U.S. Patents Nos. 4,694,490 and 4,704,725 are not available as prior art with respect to the presently pending claims. Applicants, therefore, request the withdrawal of the rejection of claims

6-316 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patents 4,694,490 and 4,704,725.

## **H. Response to Rejections under 35 U.S.C. § 103**

### **1. *Prima Facie* Case of Obviousness**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim recitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not based on Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). M.P.E.P. 706.02(j).

### **2. Rejection under 103 (a, b & e) over Applicants WO 89/02682.**

Claims 6-316 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' WO 89/02682.

The Examiner asserts that all the instant claims are unpatentable over WO 89/02682 to the extent that applicants can satisfy the support enablement requirement of Section 112, first paragraph, but not the support requirement. WO 89/02682 is the international publication number of the Applicants' own international application published March 23, 1989. The specification of this international application substantially corresponds to the specification of the instant application and the specification of the parent application filed September 11, 1987. Claims 2 to 303 are entitled to the effective filing date of November 3, 1981. However, assuming *arguendo* that the claim of priority to the 1981 application is flawed, then the claims are entitled to



an effective filing date of September 11, 1987. In either case, this international application published March 23, 1989, is unavailable as prior art. Accordingly, Applicants request the withdrawal of this rejection of claims 6-316 under 35 U.S.C. § 103(a).

**3. Rejection over Greenberg, U.S. Pat. No. 4,547,804 in view of Galumbeck et al., U.S. Pat. No. 4,725,886.**

Claims 6-316, that are directed to processes of controlling cable head end processes and monitoring of those processes and combined medium presentation, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Greenberg, U.S. Pat. No. 4,547,804 in view of Galumbeck et al., U.S. Pat. No. 4,725,886.

The Office Action states that “considering pending claims of the group 6-316, that cover, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation are suggested by [Greenberg].”

First, Applicants traverse this rejection on the grounds that Greenberg is an unavailable reference in that it was filed on March 21, 1983, subsequent to Applicants’ priority date of November 3, 1981. Additionally, Galumbeck et al. is an unavailable reference in that it was filed on April 21, 1983, again subsequent to Applicants’ priority date of November 3, 1981.

Secondly, the Office Action fails to analyze any of Applicants’ claim language in the rejection but rather chooses to summarize the specific contents of the instant 311 claims (numbers 6-316) with the statement, “processes of controlling cable head end processes and monitoring of those processes and combined medium presentation.” The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected.” This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*." (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

*Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art

and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

**4. Rejection over over Jeffers et al., U.S. Pat. No. 4,739,510.**

Claims 6-316, that are directed to, *inter alia*, processes of controlling broadcast subscriber stations, including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jeffers et al., U.S. Pat. No. 4,739,510.

The Office Action states that "considering pending claims of the group 6-316, that cover, *inter alia*, processes of controlling broadcast subscriber stations, including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation they cover what [Jeffers et al.] suggests...broadcast programming including, *inter alia*, audio and control signals that are digitized and inserted into the horizontal blanking interval of distributed television programming."

First, Applicants traverse this rejection on the grounds that Jeffers et al. is an unavailable reference in that it was filed on April 2, 1987, subsequent to Applicants'

priority date of November 3, 1981. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

Secondly, the Office Action fails to analyze any of Applicants' claim language in the rejection but rather chooses to summarize the specific contents of the instant 311 claims (numbers 6-316) with the statement, "processes of controlling broadcast subscriber stations, including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation ... broadcast programming including, *inter alia*, audio and control signals that are digitized and inserted into the horizontal blanking interval of distributed television programming." The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected." This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*." (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that

may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

*Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

**5. Rejection over Hazelwood et al., U.S. Pat. No. 4,025,851 in view of the publication "System and Apparatus for Automatic Monitoring Control of Broadcast Circuits" by Yaname et al. and Hetrich, Australian Patent No. 74,619.**

Claims 6-316, that are directed to, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hazelwood et al., U.S. Pat. No. 4,025,851 in view of the publication "System and Apparatus for Automatic Monitoring Control of Broadcast Circuits" by Yaname et al. and Hetrich, Australian Patent No. 74,619.

**a) Characterization of References**

**(1) Hazelwood et al.**

Hazelwood et al. states,

In accordance with a preferred embodiment of the invention, each network originated program is coded with a data signal from which each program may be identified. This coded data signal may take the form of a code identifying the program itself, or the code may identify the source of the program and the time that the program originated to permit the program to be identified from the station logs. The encoding is done by placing binary data on line 20 or any other unused line in the vertical interval. The coded signal is applied to the network where it is received by the network affiliated stations for immediate or delayed broadcast.

A plurality of monitoring sites are disposed about the network coverage area to monitor the programs broadcast by the network affiliates. The monitoring may be done remotely by means of a monitor receiver that receives the programs broadcast by the network affiliates and recovers the data encoded on line 20. Alternatively, the monitoring unit may be installed on the premises of the network affiliate to monitor the program material applied to the transmitter. In the latter case, there is no need to transmit the data encoded on line 20, and the data may be stripped off by the monitoring unit before the signal is applied to the transmitter.

In either case, the data recovered from line 20 is stored at the remote location in a change format, that is, a format wherein the data is stored once, and new data is stored only when there is a change in the data. In addition, data indicative of the time interval between changes in data is stored. The time information permits delayed broadcasts to be identified since the real-time data will not correspond to the network time data in a delayed broadcast.

Each remote unit is periodically interrogated (usually once per day) via telephone line by a centrally located computer that controls a mini-computer located in each of the remotely located monitor units. Upon interrogation, the mini-computer causes the stored data to be transmitted in blocks to the central computer together with error checking data to permit the central computer to request the remotely located mini-computer to retransmit the data in the event that an error is found. In addition, each remotely located mini-computer may be reprogrammed by the central computer in the event that a modification of the data handling is desired. This is accomplished by providing each remotely located mini-computer with a hard-wired read-only memory (ROM) that initiates the data processing and transmission and a random-access memory (RAM) which may be reprogrammed by the central computer upon completion of the read-only memory routine. (Column 2, lines 8-59.)

In response to the Office Action's characterization of Hazelwood et al., on page 188, the Office Action states that "the embedded codes ... identify the programming being broadcast by *title*,..." (emphasis added). Hazelwood et al. fails to teach identification by "title," but rather, "identified by the source identification code ... and the time of origin ... serving to identify the program. Alternatively, a unique program identifying code can be generated for identifying each program, and used instead of or in addition to the time and source identification code;...", (column 5 lines 61-66).

The Office Action on page 189 characterizes Hazelwood et al. as teaching "the embedded monitoring *instruction* codes...", and, "means for performing communication *programming* to a storage device," (emphasis added). Hazelwood et al. fails to teach "instruction codes," and "performing communication *programming* to a storage device," but rather "a data signal from which each program may be identified," (column 2 line 11), is "transmitted in blocks to a central computer...", (column 2 lines 46-47).

Additionally, the Office Action on page 189 states, "At the encoder 12 of Fig. 1, has to have (sic) been controlled so as to communicate the monitoring codes to the summing circuit 14 at "selected" times in view that the monitoring codes were carried through the line at the selected time in which they were provided to summing circuit 14."

Applicants' best understanding of the Office Action's characterization may apply to Applicants instant claim language:

Claims 16-17, 33, 40, 42, 104-105, 107, 151-152, 154, 199, 201, 203, 249, 251, 272-273, 275-276, 278 & 280, "specific time,"

Claims 17, 42, 107, 154, 234, 251, 275, 278, "scheduled time," and

Claim 17, 28, 42, 107, 154, 267-268, 272, 275-276, 278, 282, 299 & 302, "different times."

However, Hazelwood et al. mere teaches that "the video information from the camera 10 is combined with the coding information from the encoder 12 at a mixing point 14 before the signal applied to a network feed line 16 which feeds all of the local network affiliates such as the network outlet 18 shown in Fig. 1," (column 3 lines 23-28). There is no teaching in Hazelwood et al. of "selected times" of embedding identification codes other than when programming is being feed from camera 10 to mixing point 14.

**(2) Yaname et al.**

Yaname et al. teaches at page 15 "transmitting by multiplexing a control signal together with the identification signal on the program signal," wherein the control signal is characterized by a " $Q_E$  signal transmitted from Station Line ...[when  $Q_E$  is] received by Station M, Station M switches its circuit toward Station Line, and each lower station thereafter switches its circuit toward the next transmitting station in turn." This switching function as initiated by the control signal ( $Q_E$ ) at the transmitter stations initiates communication to confirm "that the trouble did not occur between itself and the next higher station, troubleshooting can effect rational recovery action without damaging stations unnecessarily."

**(3) Hetrich**

Hetrich teaches control signals "are preferably sent over the network lines during non-programming periods such as the normal one minute station breaks between



programs,” (page 11). “These control signals may be used to start and stop audio recorders to record special programs for later broadcast, to accomplish the switching of local and network programs, to interrupt programming for emergency announcements, etc.,” (page 10).

In response to the Office Action’s characterization of Hetrich, the Office Action on page 191 states that, “Hetrich discloses ... embedding control signals used for *identifying* the portions of the network programming which are to be recorded by the storage device of the affiliate stations for delayed re-broadcast,” (emphasis added).

However, Hetrich fails to teach or suggest the control signals “identifying the portions of the network programming.” All Hetrich teaches the control signals are operative to do is to “start and stop audio recorders to record special programs for later broadcast, to accomplish the switching of local and network programs, to interrupt programming for emergency announcements,” (at page 10).

Additionally, the Office Action’s characterization of Hetrich on page 192 states that, “the control codes are effective to instruct the affiliate station to delay the network programming for some selected period of time.” Applicants traverse this interpretation of Hetrich’s disclosure since all that the control signals are disclosed to accomplish is to “start and stop audio recorders to record special programs for later broadcast, to accomplish the switching of local and network programs, to interrupt programming for emergency announcements,” (at page 10). There is no teaching or suggestion that the control signals “instruct” the network station to delay the network programming, but merely to start and stop a recording device at the network station. The disclosure anticipates the subsequent broadcasting of the special recorded programs, but fails to indicate that the record start/stop control signal additionally “instructs” the subsequent rebroadcasting.

**b) Absence of Comparison of Cited References with Applicants'  
Claim Language**

The Office Action states that “considering pending claims of the group 6-316, that cover, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation [Hazelwood] suggests the term ‘processor’ wherein the network station , the affiliate station, and the individual circuits which make up the network and affiliate stations, all function to process signals and hence are considered processors of a kind.”

The Office Action fails to analyze any of Applicants’ claim language in the rejection but rather chooses to summarize the specific contents of the instant 311 claims (numbers 6-316) with the statement, “processes of controlling cable head end processes and monitoring of those processes and combined medium presentation...wherein the network station , the affiliate station, and the individual circuits which make up the network and affiliate stations, all function to process signals and hence are considered processors of a kind.” The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected.” This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified.*” (emphasis added) Section 707.07(i) of the M.P.E.P.

sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P. § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

*Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these

references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

**c) Office Actions Improper Motivation for Combining References**

The Office Action on page 190 states, “pending claims of the 6-316, directed to, *inter alia*, processes of controlling cable head end processes and combined medium presentation, not suggested by [Hazelwood et al.], are further suggested [by] Yaname et al. and [Hetrich].” However, the Examiner never states what elements of Applicants’ claims were not suggested by the base reference Hazelwood et al. Applicants traverse this rejection as being improper and request withdrawal of the rejection.

**(1) Improper Combination of Hazelwood et al. in view of Yaname et al.**

Applicants contend that the Office Action improperly combined the switching control codes of Yaname et al. with Hazelwood et al. The disclosure of Hazelwood et al. is directed toward the storing of embedded program identifiers at either network affiliate stations or at viewer receiver stations. Hazelwood fails to teach or suggest any anticipation of transmitted control codes that alter transmitter stations’ circuits to switch output toward upline transmitter stations as taught by Yaname et al. The only disclosure in Hazelwood et al. regarding altering the functionality of a station is the reprogramming of the data collecting monitoring devices by a central data collection station via telephone lines. The Examiner cannot assume it is obvious to modify Hazelwood et al. in view of the control codes of Yaname et al. simply due to the fact that both disclosures have “identification codes” in common, when the base reference Hazelwood et al. fails to anticipate any need for the alleged modifying multiplexed control signal of Yaname et al. that changes the functionality of switching output at a transmitter station. Applicants traverse the rejection combining Hazelwood et al. and Yaname et al. for failing to provide

proper motivation for combining the references since there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). M.P.E.P. 706.02(j).

**(2) Improper Combination of Hazelwood et al. and Yaname et al., further in view of Hetrich.**

Assuming *arguendo*, that it would have been obvious to modify Hazelwood et al. in view of Yaname et al., Applicants traverse the combination of Hetrich with the two mentioned references. Applicants contend that there was no motivation provided and that it would be improper to combine the recording start and stop control signals transmitted at station breaks of Hetrich with the transmitting station circuit switch control signals of Yaname et al. The Examiner cannot assume it would have been obvious to modify Hazelwood et al. and Yaname et al. further in view of Hetrich due to the fact that both disclosures have "control signals" in common. Yaname et al. discloses transmitting control codes for the purpose of switching output circuits at transmitter stations for the purpose of confirming that the transmission trouble (errors) did not occur between itself and the next higher transmitter station. There is no teaching or suggestion in Yaname et al. that the disclosed  $Q_E$  signal could be modified to anticipate and other function including the starting and stopping of recorders during non-program periods as disclosed by Hetrich. Applicants traverse the rejection combining Hetrich with Hazelwood et al. and Yaname et al. for failing to provide proper motivation for combining the references since there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). M.P.E.P. 706.02(j).

6. **Rejection over either one of the common subject matter suggested by Campbell et al., (WO 81/02961, abandoned parent application no. 135,987, and U.S. Pat. No. 4,536,791), in view of at least one or more of: Breeze "Television Line 21 Encoded Information and It's Impact on Receiver Station Design"; Schnee, U.S. Pat. No. 4,290,142; and Zaboklicki, DE 2,904,891.**

Claims 6-316, that are directed to, *inter alia*, processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes, are rejected under 35 U.S.C. § 103(a) as being unpatentable over either one of the common subject matter suggested by Campbell et al., (WO 81/02961, abandoned parent application no. 135,987, and U.S. Pat. No. 4,536,791), in view of at least one or more of: Breeze "Television Line 21 Encoded Information and It's Impact on Receiver Station Design"; Schnee, U.S. Pat. No. 4,290,142; and Zaboklicki, DE 2,904,891.

a) **Office Action's Failure to Identify Applicants Claim in the Rejection**

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected." This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

Applicants summarize the rejection:

- 1) The Office Action states, "Campbell et al. suggest (sic) the claims that cover an addressable cable television control system controlling television program and data signal transmission from the cable head end to the subscriber stations," (at page 193).
- 2) The Office Action then characterizes the Campbell et al. reference with no specific mention to any claims at issue in the instant application.

3) The Office Action then states, "Claims that cover processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes that are not suggested by Campbell et al. are suggested by Breeze," (at page 195).

4) The Office Action then characterizes the Breeze reference with no specific mention to any claims at issue in the instant application.

5) The Office Action then states, "Claims that cover processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes that are not suggested by Campbell et al. and are not suggested by Breeze, are suggested by [Schnee]," (at page 196).

6) The Office Action then characterizes the Schnee reference with no specific mention to any claims at issue in the instant application.

7) The Office Action then states, "Claims that cover processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes that are not suggested by Campbell et al. and are not suggested by Breeze, are not suggested by [Schnee], are suggested by [Zaboklicki]," (at page 197).

8) The Office Action then characterizes the Zaboklicki reference with no specific mention to any claims at issue in the instant application.

9) The Office Action states that "it would have been obvious ... for providing cable subscribers with enhanced interactive processes including enhanced conventional entertainment, providing useful information, and offering greater control to the cable head end operators." Applicants note that in the entire rejection, not one word of Applicants' instant claim language was addressed. It seems that the Examiner uses broad characterizations of general concepts found in the instant application and elsewhere in Applicants' co-pending applications to make this rejection.

Applicants traverse this grounds of this rejection as being improper for failing to identify Applicants' specific claim language that allegedly reads on the prior art.

When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*." (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

*Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art



and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

**b) Rejection further in view of Zaboklicki.**

Zaboklicki discusses in general terms (as best understood by Applicants) an "interactive television system" (i) wherein "a local central unit is provided in the home television receivers on the receiver side; that central unit switches the data selection systems on the basis of the television viewer's answer and on the basis of the centrally transmitted digital processing program for the television segments (transmission fragments)" (English language translation of DE 29 04 981 A 1 at 10 ll. 13 - 18); (ii) with "individual variants of ... additional information ... passed on in the form of acoustic or sound signals in the television receiver in the infrared band to the individual infrared receivers" (*id.* at 11 ll. 2 - 7); (iii) with "participation of the television viewer in the centrally transmitted telecast in such a way that the output signals of the local central unit in the viewfinder of the television camera turn on the contours of the person is provided for by the director [whereby the shape of the viewer contained in these contours

is blended into the main content” (*id.* at page 12, lines 8 - 13); and (iv) wherein, “[i]n the case of telecasts where an answer or the opinion of the television viewers is desired... the viewer’s answer is put out parallel and converted into telephone signals... introduced into the subscriber telephone line... [and] supplied to the monitor in the television studio after statistical processing” (*id.* at 12, l. 13 through p. 13 l. 3).

In fact, Zaboklicki is so vague and indefinite in its description of the technology that virtually any reliance on the publication as prior art in the instant application can only be based on speculation and conjecture about the functionalities alleged to be provided by, or the method of operation of, the Zaboklicki system. Zaboklicki is not an enabling publication.

Applicants note the PTO has supplied and relies on a translation of German Patent publication No. DE 2904981 A 1 in formulating the rejections of the subject claims. Applicants have found that the applied German Patent publication is based on an earlier Polish patent application No. PL 204525 A filed February 9, 1978. In addition to the German publication, the earlier Polish application also forms the basis for French patent publication FR 2417226 A published October 12, 1979 and British patent publication GB 2016874 A published September 26, 1979.

After careful review of the Polish application and British publication, it is self evident that neither the translation provided by the PTO nor the British patent publication (presumably prepared or approved by Zaboklicki) indicates or suggests any method of operation of, or relationship between, the blocks shown in the various figures. In fact, it is difficult or impossible to determine what functions are being performed by the blocks shown in the various figures because many of the labels are not descriptive, failing to articulate or indicate the intended function. The written description does not cure this defect of the disclosure, failing to describe the functions or the interactions between the blocks. Examples of labels inadequately describing the structure of and function performed by the corresponding blocks are included in the following table.

Ref. No	Label	Description	
		English Language Translation of German Patent Publication	British Patent Publication
4	The circuit for the prescreening of information items for television viewers	preliminary screening of the information items for the television viewer	distributes the information for televiewers
5	The control circuit	None	output of control system 5 is additionally fed to the circuits 8 and 10 and is also applied to a circuit 11 for restoring the music signal
6	The central unit (the processor, for example, integrated microprocessor)	the output signals of the central unit 6 control a data selection circuit 8; energizes a sound signal switching unit 20 in at least one additional sound channel	output of circuit 3 is fed to a processor 6 ... [which] is also fed with signals representing the televiewer's answer from the circuit 2 [and] transmits a digital programme of manipulation, televiewers' answers and the successive identification data of ... individual fragments of the broadcast to a store or memory (RAM) 7; keyboard 12 feed into the processor 6 and the latter output to a transmitter of infra-red signals 13 which produces a remote control signal at 14; Digital data and audio signals with different variants of additional information are applied at 15 to the input of a receiver 16 of infra-red signals having an output in the form of digital data fed over line 17 to processor 6; switching-on of the selected audio channel as determined by the processor 6
10	The circuit for video signal conversion and image illumination	used to convert video signals and for image illumination	for converting video signals and displaying a picture
11	The circuit for sound signal restitution	circuit for sound signal restitution	for restoring
15	The digital data and the phonics with the different variants of additional information	None	input of receiver 16
19	The command for sound turn-on in the corresponding channel	command for a sound signal of a corresponding channel that is supplied to a circuit 20 for turning on the selected sound channel	commands to switch-on the audio signal from a specific channel are fed over the command line 19 from the processor 6 to the receiver 20
27	The switchover of the television channels for the prescreening of the corresponding fragments of a telecast	line for switching over television channels for preliminary screening of the corresponding fragments of a telecast	television receiver 54 is fed over line 53 with control signals from the remote control signal receiver 52 and over the one 27 from the output system 49 of the processor

Ref. No	Label	Description	
		English Language Translation of German Patent Publication	British Patent Publication
28	The short term of call signal transmission during which the answer is delayed	control signal for the delay of the answer, which represent the short span of time during which call signal transmission takes place and during that time span, the answer is delayed.	[Control system 32] is also fed via 28 with a short delay signal for sending the dialing signals when the answer is postponed
29	The prefix generator for transmission announcement of the television viewer's answer	for a transmission announcement of the television viewer's answer with a subscriber generator 30 and with a circuit 31 to generate the television viewer's answer	prefix generator for announcing the transmission of the televiwer's answer
35	The circuit for the introduction of the initial data of the television viewers	serves to put in initial data from the television viewers	circuit for introducing the televiwer's answers
36	The circuit for the prescreening of the digital data from the video signal	causes the preliminary screening of the digital data of the video signal	system for distributing the digital data from the video signals
38	The multiplexer circuit	supplies a signal for the subscriber telephone line 33.	Output from the units 29 and 30, 31 and 32 are applied to a multiplexer 38 whose output 46 is in turn fed to a subscriber telephone line
40	The circuit for the prescreening of the digital handling program (telesoftware) and the identification data of the individual fragments of the telecast	for the prescreening of digital processing programs and the identification data of the individual transmission fragments with the input circuits 39	system for separation of the telesoftware and the identification data of the individual fragments of the broadcast
41	The data selection circuit of the circuit for the comparison of the addresses of the teletext information items ....	constitutes a data selection circuit or a circuit for the comparison of the addresses of text information, for example, page numbers. Local central unit 6 switches over the data selection circuits 41 as a result of the answers form a television viewer and the digital processing programs which are supplied to the central unit 39 by the output circuit	information selections system or a system for comparing the address of the teletext information, for example the page number, in conjunction with the local processor 6 for switching over the information selection system depending upon the televiwers answer and on the telesoftware
42	generator of the alphanumeric and graphic symbols	generator for alphanumeric and graphic symbols	alphanumeric and graphic character generator
43	circuit for turning on one of the additional sound channels in the television receiver (54)	switch-on or for the operation of additional sound channels of a television receiver 54	audio channel switch for switching on the sound signal in the television receiver
45	multiplexer circuit	multiplexer circuit	multiplexer of the receiver

Ref. No	Label	Description	
		English Language Translation of German Patent Publication	British Patent Publication
46	signal output for the subscriber telephone line	None	none
47	circuit for the prescreening of the symbols for the control of the image illumination function	prefiltering or prescreening of the symbols for the control of image illumination	system for distributing characters to the display control
48	output circuit for symbols	output circuit	character output system
51	multiplexer circuit in the viewfinder of the television camera for the application of the graphic symbols on the image	multiplexer circuit 51 in the viewfinder of a television camera is used to project the graphic symbols into the image of receiver 54 of the television camera that furthermore is connected to a receiver 52 for a remote-control signal	multiplexer system
54	television receiver with at least one additional sound channel	Receiver	television receiver including an audio channel switch 43 for switching on the sound signal I the television receive and an output circuit 55 for the video signal
56	teletext decoder with the additional data output after hamming decoder	a video text decoder 56 with an additional data output (hamming decoder)	teletex decoder having an additional data output behind the Hamming decoder comprising a control system 26, a system 36 for distributing the digital data from the video signals, a system 40 for separation of the telesoftware and the identification data of the individual fragments of the broadcast, an information selection system 41, (or a system for comparing the address of the teletex information, for example the page number, in conjunction with the local processor 6 for switching over the information selection system depending upon the viewers answer and upon the telesoftware), an RAM memory 44, a system 57 for distributing control characters, (for example no display), an alphanumeric and graphic character generator 42, a system 47 for distributing characters to the display control and a character output system 48.
57	circuit for the prescreening of the control symbols, for example, a command: do not illuminate	A circuit 57 in decoder 56 is used for the prefiltering of control signals or control commands (For example, do not illuminate.)	system for distributing control characters, (for example no display)

It is established that prior art must be enabling. *Rockwell Int'l. Corp. v. United States*, 147 F.3d 1358, 1365, 27 U.S.P.Q.2d 1027 (Fed. Cir. 1998). "In order to render a claimed apparatus or method obvious, the prior art must enable one skilled in the art to make and use the apparatus or method." *Beckman Industries, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551, 13 U.S.P.Q.2d 1301, 1304 (Fed. Cir. 1989) (citing *In re Payne*, 606 F.2d 303, 314, 203 U.S.P.Q. 245, 255 (CCPA 1979)). Accordingly, in *Beckman*, held as a correct statement of the law were jury instructions that stated, "References relied upon to support a rejection for obviousness must provide an enabling disclosure. That is to say, they must place the claimed invention in the possession of the public." *Id.* at 1550-51, 13 U.S.P.Q.2d at 1303-4. The Federal Circuit has observed that "even if the claimed invention is disclosed in a printed publication, that disclosure will not suffice as prior art if it was not enabling." *In re Donohue*, 766 F.2d 531, 533, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985) (citing *In re Borst*, 345 F.2d 851, 855, 145 U.S.P.Q. 554, 557 (C.C.P.A. 1965), cert. denied, 382 U.S. 973, 148 U.S.P.Q. 771 (1966) ("the disclosure must be such as will give possession of the invention to the person of ordinary skill")). See also *In re Epstein*, 32 F.3d 1559, 1568, 31 U.S.P.Q.2d 1817, 1823 (Fed. Cir. 1994); *Reading & Bates Construction Co. v. Baker Energy Resources Corp.*, 748 F.2d 645, 651-52, 223 U.S.P.Q. 1168, 1173 (Fed. Cir. 1984); *Preemption Devices, Inc. v. Minnesota Mining & Manufacturing Co.*, 732 F.2d 903, 906, 221 U.S.P.Q. 841, 843 (Fed. Cir. 1984).

If anything is clear, it is that Zaboklicki does not place the technology of Applicants' invention into the hands of the public. The reference to Zaboklicki at most presents some block diagrams which, as best understood, are directed to the four functions previously outlined. The details of these functionalities or how they are accomplished are not described in sufficient detail or with sufficient clarity to constitute an enabling disclosure.

Therefore, Applicants respectfully request the withdrawal of this rejection of claims 6-316 under 35 U.S.C. § 103(a).

7. **Rejection further in view of one or more of: Hazelwood et al., Yaname et al., Hetrich, Marsden, Young et al., "Journal of SMPTE" Oct. 1971, U.S. Pat. No. 3,761,888 to Flynn, U.S. Pat. No. 3,627,914 to Davis, Tunmann et al., U.K. Pat. No. 959,374 to Germany, Byloff, Chiddix, Skilton, Schiller et al., Zettl, Vikene, U.S. Pat. No. 4,547,804 to Greenberg, Jeffers et al., Diederich, Campbell et al. (WO 81/02961, abandoned U.S. application no. 135,987, and U.S. Pat. No. 4,536,791), Kazama et al., Gosch, Stern, Breeze, Barlow, Millar, U.S. Pat. No. 4,725,886 to Galumbeck et al., "CBS/CCETT North American Broadcast Teletext Specification," Zaboklicki, U.S. Pat. No. 4,064,490 to Nagel, U.S. Pat. No. 4,251,691 to Kakihara, Hedger et al., Anderson, Gunn, Gaucher, U.S. Pat. No. 4,290,142 to Schnee et al.**

Claims 6-316, that are directed to, *inter alia*, either processes of controlling affiliate stations and processes and monitoring of those processes and combined medium presentation or processes of controlling subscriber stations and method and process for monitoring and providing combined medium presentations, that fall out each particular determining group members of the group of claims described in rejection above, the groups are rejected further in view of one or more of: Hazelwood et al., Yaname et al., Hetrich, Marsden, Young et al., "Journal of SMPTE" Oct. 1971, U.S. Pat. No. 3,761,888 to Flynn, U.S. Pat. No. 3,627,914 to Davis, Tunmann et al., U.K. Pat. No. 959,374 to Germany, Byloff, Chiddix, Skilton, Schiller et al., Zettl, Vikene, U.S. Pat. No. 4,547,804 to Greenberg, Jeffers et al., Diederich, Campbell et al. (WO 81/02961, abandoned U.S. application no. 135,987, and U.S. Pat. No. 4,536,791), Kazama et al., Gosch, Stern, Breeze, Barlow, Millar, U.S. Pat. No. 4,725,886 to Galumbeck et al., "CBS/CCETT North American Broadcast Teletext Specification," Zaboklicki, U.S. Pat. No. 4,064,490 to Nagel, U.S. Pat. No. 4,251,691 to Kakihara, Hedger et al., Anderson, Gunn, Gaucher, U.S. Pat. No. 4,290,142 to Schnee et al.

**a) The Provisional Rejection over Numerous References is Improper**

Paragraph 19 of the Office Action it is stated: "Pending claims of the group 6-316 that are directed to, *inter alia*, either process of controlling affiliate stations and processes and monitoring of those processes and combined medium presentation or processes of controlling subscriber stations and method and process for monitoring and providing combined medium presentations, or both, that fall out each particular determined group members of the group of claims described in rejection above, the groups are provisionally rejected further in view of one or more of [some thirty-six listed references]." This statement clearly fails to state a proper rejection. This statement fails to provide reasons for a rejection and is clearly so uninformative that it prevents the applicant from recognizing and seeking to counter any potential grounds for rejection. Applicants cannot determine to what claims this statement is applicable. The Examiner has failed to cite to the best references and avoid merely cumulative references. The references cited include at least some that cannot be relied upon as prior art against the pending claims. The Examiner has failed to explain the pertinence of each reference and to specify each rejected claim. The Office Action includes an explanation of the Examiner's understanding of the level of skill in the art in terms of some of the cited references. However, this explanation fails to include the elements of a proper rejection under 35 U.S.C. § 103(a). Furthermore, the statement does not purport to be a rejection, but rather states that groups are *provisionally* rejected. Applicants find no rejection in this statement by the Examiner to which a response from Applicants is required.

The Examiner has no authority to "provisionally" reject claims in view of one or more of a large group of generally cumulative references. The Office Action includes no reference to any authority for this "provisional" rejection. The M.P.E.P. provides for a provisional rejection only in the situation where a pending application upon issuance will become valid prior art, against provisionally rejected claims, under 35 U.S.C. § 102(e),



35 U.S.C. § 101 (statutory double patenting), or the judicially created doctrine of obvious type double patenting. The pending application used in the provisional rejection must have a common assignee or common inventor with the application containing the provisionally rejected claims. *See*, M.P.E.P §§ 706.02(f), 706.02(k), and 804. The provisional rejection is permitted to alert applicants that they should expect an actual rejection on the merits if and when the applied pending application issues. There is no authority nor is there any good reason to issue a provisional rejection over references that are issued patents or have been published. The Examiner appears to attempt to alert Applicants to potential rejections that will be made once the Examiner has fully reviewed and analyzed the instant application to determine whether the claims define a useful, novel, non-obvious, and enabled invention that has been clearly described in the specification. However, the Examiner should clearly articulate any rejection early in the prosecution process so Applicants have the opportunity to provide evidence of patentability and otherwise respond completely at the earliest opportunity. M.P.E.P. § 706. The Examiner may not reserve rejections for future actions. “The examiner’s action will be complete as to all matters.” 37 C.F.R. § 1.104(b). “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable *will* be rejected.” 37 C.F.R. § 1.104(c)(1)(emphasis added). As this purported “provisional” rejection is asserted under no authority and fails to clearly articulate any rejection, Applicants respectfully submit that this “provisional” rejection has no effect on the instant application.

**b) Rejection under 35 U.S.C. § 103 is Improper**

Additionally, this statement fails to provide reasons for a rejection and is clearly so uninformative that it prevents the applicant from recognizing and seeking to counter any potential grounds for rejection. Applicants cannot determine to what claims this statement is applicable. The Examiner has failed to cite to the best references and avoid

merely cumulative references. The references cited include at least some that cannot be relied upon as prior art against the pending claims. The Examiner has failed to explain the pertinence of each reference and to specify each rejected claim. The Office Action includes an explanation of the Examiner's understanding of the level of skill in the art in terms of some of the cited references. However, this explanation fails to include the elements of a proper rejection under 35 U.S.C. § 103(a).

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected." This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*." (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

*Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

#### **I. Response to Examiner's Administrative Requirement**

Applicants respectfully traverse the requirements imposed by the Examiner in the Office Action at page 224.

The Examiner requires Applicants to either:

- (1) file terminal disclaimers in each of the related 329 applications terminally disclaiming each of the other 329 applications; or
- (2) provide an affidavit attesting to the fact that all claims in the 329 applications have been reviewed by applicant and that no conflicting claims exist between the applications; or
- (3) resolve all conflicts between claims in the related 329 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 329 applications.

In addition, Examiner states that failure to comply with any one of these requirements will result in abandonment of the application.

Applicants traverse this requirement for the reasons stated in Section II C of the Amendment and Request for Reconsideration filed September 18, 1998 in application number 08/470,571. Further, Applicants have fully responded to the re-imposition of this requirement in the Petition To The Commissioner Under 37 C.F.R. § 1.181 filed March 7, 2000, which requests, *inter alia*, that this improper requirement be withdrawn.

**J. Response to Obviousness-Type Double Patenting Rejection**

Applicants respectfully request that the Examiner reconsider and withdraw his rejection based on obviousness-type double patenting on two separate grounds.

1. The Examiner has totally confused and misapplied the established law of double patenting and, further, has failed to follow the mandates of the Manual of Patent Examining Procedure as to double patenting rejections.
2. The Examiner has also failed to analyze the pending claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claims and those in the issued Harvey patents.

**1. PTO Assertions in Office Action mailed January 7, 2000**

The Examiner has rejected claims 6-316 of the application under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 4,684,490 (Harvey I); claims 1-5 of U.S. Patent No. 4,704,725 (Harvey II); claims 1-25 of U.S. Patent No. 4,965,825 (Harvey III); claims 1-26 of U.S. Patent No. 5,109,414 (Harvey IV); claims 1-71 of U.S. Patent No. 5,233,654 (Harvey V); and claims 1-56 of U.S. Patent No. 5,335,277 (Harvey VI), in view of at least one or more of a list of over 30 prior art references from pages 233-244.

In the Office Action at page 234, the Examiner rejects 6-316 under obviousness-type double patenting as being unpatentable over any single claim or combination of claims are "no more than an obvious variation of the patented claims when the teachings discussed throughout this action are considered." (Office Action at 234.) The Examiner attempts to assert a catch-all rejection by incorporating all arguments and allegations discussed throughout the pages of the Office Action. Again, the Examiner provides no authority for this sweeping new ground for rejecting claims under obviousness-type double patenting.

The Examiner's application of obviousness-type double patenting standard represents an erroneous and misapplied interpretation of existing case law and is contrary to patent examining procedure. First, the Examiner has confused and misapplied the established law of double patenting and has failed to follow the mandates of the M.P.E.P. as to double patenting rejections. Secondly, the Examiner has also failed to analyze the pending claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claimed and those issued in the Harvey patents as required by the M.P.E.P.

Based on the following discussion, Applicants respectfully request the withdrawal of these rejections.

## 2. The Scope of the Double Patenting Doctrine

The prohibition against double patenting is a judicial doctrine based on the language of 35 U.S.C. § 101, which specifies that an inventor who invents “any new and useful process, machine, manufacture, or composition of matter...may obtain a patent therefor.” In *Miller*<sup>1</sup>, the U.S. Supreme Court held the term “a patent” to mean, “two valid patents for the same invention cannot be granted either to the same or to a different party.”<sup>2</sup> Therefore, the claims in a second patent must be patentably distinct from the claims in a first patent or the second patent would be an improper extension of the first.

As the preclusion is to obtaining two patents on the same invention or an obvious modification of the same invention, the sole question is whether by examining the scope of the claims, one has attempted to claim the same subject matter twice, or an obvious variation. No prohibition exists against a second patent on subject matter that is disclosed but not claimed in the first patent.

Under 35 U.S.C. § 120, a patent applicant may submit additional claims in a subsequent application which are supported by the disclosure in the original applications' specification. A proper continuation application and its original application are considered “parts of the same transaction, and both as constituting one continuous application, within the meaning of the law.”<sup>3</sup> Furthermore, 35 U.S.C. § 120 does not place a definite time limit on filing a continuing application. Rather, all that is required to preserve an earlier effective filing date as to common subject matter is copendency or a continuous chain of copendency.

The double patenting doctrine prevents an extension of a patent term which would occur if successive patents were allowed on the same invention or obvious variants.

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<sup>1</sup> *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894).

<sup>2</sup> *Id.* at 197.

<sup>3</sup> *In re Hogan*, 449 F.2d 595, 603 (CCPA 1977)(quoting *Godfrey v. Earnes*, 68 U.S. 317, 325-6 (1864)).

However, if two patents contain the same disclosure, but claim different inventions or nonobvious variations, double patenting does not exist.

### 3. Patent Office Procedure

The U.S. Patent and Trademark Office ("PTO") has specified a procedure in the Manual of Patent Examining Procedure (M.P.E.P.) for Examiners to follow in establishing a *prime facie* case of double patenting. In determining whether a proper basis exists for a double patenting rejection, the Examiner must determine whether:

1. A double patenting rejection is prohibited by the third sentence of 35 U.S.C. § 121 related to divisional applications,
2. A statutory basis exists (i.e., whether same-invention double patenting is present), or
3. A non-statutory basis exists (i.e., whether obviousness-type double patenting is present).<sup>4</sup>

Assuming the application is not a divisional application, the Examiner must establish in step 2 that the same invention is being claimed twice. The Court specified in *In re Vogel*, 422 F.2d 438, 164 U.S.P.Q. 619 (C.C.P.A. 1970), that in determining same-invention double patenting analysis, one must ask "is the same invention being claimed twice?...[The] "invention" here means what is defined by the claims, whether new or old, obvious or unobvious....By the "same invention" we mean identical subject matter."<sup>5</sup> The court stated "that claims may be differently worded and still define the same invention."<sup>6</sup> In conclusion, the court found "the only objective test" for same-invention double patenting as,

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<sup>4</sup> M.P.E.P. § 804.

<sup>5</sup> *In re Vogel*, 422 F.2d at 441.

<sup>6</sup> *Id.*

whether one of the claims could be literally infringed without literally infringing the other. If it could be, the claims do not define identically the same invention.<sup>7</sup>

If there is no same-invention double patenting, then the Examiner must establish in step 3 obviousness-type double patenting wherein the grant of a patent with the claims in the application would unjustly extend the rights granted by the first patent.

#### **4. Nonstatutory Double Patenting**

In defining nonstatutory double patenting, the M.P.E.P. provides three types of nonstatutory-type double patenting based on the judicial doctrine, which include one-way obviousness, two-way obviousness<sup>8</sup>, and nonobviousness rejections.<sup>9</sup>

Under the M.P.E.P. requirements, if the application at issue is the later filed application, only a one-way determination of obviousness is needed to resolve the issue of double patenting. The issue to be determined is whether the invention defined in a claim in the application is an obvious variation of the invention defined in a claim of the patent. *See, e.g., In re Berg*, 46 U.S.P.Q.2d 1226 (Fed. Cir. 1998). The M.P.E.P. mandates that unless a claimed invention in the application is obvious over a claimed invention in the patent, an Examiner should make no double patenting rejection of the obviousness-type. Thus, the sole issue is the scope of the inventions as defined by the claim language in the patent and later filed application.

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<sup>7</sup> *Id.*

<sup>8</sup> A two-way obviousness double patenting rejection arises in the specific instance where the claims of a patent application are being compared with the claims of a later filed but earlier issued patent. This is not the case with respect to the present double patenting rejection.

<sup>9</sup> M.P.E.P. § 804. Nonobviousness-type double patenting rejections arise in circumstances as described in *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). With respect to the instant application, a nonobviousness-type double patenting rejection was made on February 6, 1997, and withdrawn in the Office Action mailed on March 31, 1998.



**a) Standard for Determining One-Way Obviousness-Type Double Patenting**

*In re Kaplan*<sup>10</sup>, the Federal Circuit specified that an obviousness-type double patenting rejection rests on the prohibition against issuance of a second patent that would continue protection, beyond the expiration date of the first patent, or a mere variation of the previous patented invention that would have been obvious to those of ordinary skill in the relevant art.

Thus, in establishing a *prima facie* case of obviousness-type double patenting, the Examiner must,

1. Identify the inventions claimed in the claims under consideration and in the patent claims,
2. Establish that any variation(s) between the inventions claimed in the claims under consideration and the earlier-issued patent claims would have been obvious to person of ordinary skill in the art, and
3. Establish a *prima facie* case of obviousness.<sup>11</sup>

To summarize, the Examiner must show that (1) the inventions claimed (2) are not patentably distinct based on (3) a *prima facie* showing of obviousness. Instead, the Examiner has provided bald statements that obvious variations exist. The mere finding that the claims themselves are obvious variations, without establishing that the alleged variations would have been obvious, cannot properly support an obviousness-type double patenting rejection.

In the Office Action under paragraphs 22-23, the Examiner has failed to establish a *prima facie* showing of obviousness-type double patenting in the rejection of 6-316. In particular, the Examiner has not identified the scope of the inventions of the instant

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<sup>10</sup> *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986).

<sup>11</sup> See *In re Longi*, 759 F.2d 887, 225 USPQ 645, 651 (Fed. Cir. 1985) (Examiner must provide *prima facie* case of obviousness for obviousness-type double patenting rejection. The burden then shifts to the Applicant to rebut the *prima facie* case).

application and the patents as determined by the claims. Secondly, the Examiner has not positively identified any variations in the claims of the instant application and the claims of the patent. Examiner has provided broad allegations that obvious variants exist, but fail to specifically state these allegedly obvious variants. Thirdly, the Examiner has not shown a *prima facie* case of obviousness under the requirements of 35 U.S.C. § 103. The Examiner has not indicated proper motivation in making the alleged obvious modifications. Since no motivation is provided, it may follow that the variations are not obvious. Moreover, monopolies would not be extended on the same claimed invention.

**(1) Identifying the Inventions Claimed**

**(a) Scope of the Inventions as Defined by the Claim Language**

The C.C.P.A. in *In re Vogel*<sup>12</sup> summarized this step by asking, “does any claim in the application define merely an obvious variation of an invention disclosed and claimed in the patent?”<sup>13</sup> The analysis is based on what the claim defines, and not merely the claim language itself. This first step in the analysis should not focus on what the claim language *discloses*, but on rather what the claim language *defines*.<sup>14</sup> As noted by the Federal Circuit,

it is important to bear in mind that comparison can be made only with what invention is *claimed* in the earlier patent, paying careful attention to the rules of claim interpretation to determine what invention a claim *defines* and not looking to the claim for anything that happens to be mentioned in it *as though it were a prior art reference*.<sup>15</sup>

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<sup>12</sup> *In re Vogel*, 422 F.2d 438, 164 USPQ 619.

<sup>13</sup> *Id.*, 164 USPQ at 622.

<sup>14</sup> *General Foods Corp. v. Studiengesellschaft Kohle mbh*, 972 F.2d 1272, 23 USPQ 1893, 1845 (Fed. Cir. 1992).

<sup>15</sup> *Id.*, 972 F.2d at 1280.

[T]he fundamental rule of claim construction, that what is claimed is what is *defined by the claim taken as a whole*, every claim limitation...being material<sup>16</sup>

...

[P]atent claims are looked to only see what *has been patented*, the subject matter which *has been protected*, not for something one may find to be disclosed by reading them<sup>17</sup>

Rather than identifying the scope of the inventions as defined by the claims, the Examiner has assumed an obviousness-type double rejection based on two claims in separate applications supported by the same embodiment of the applications' common specification, as set forth in paragraph 23. The basis for the Examiner's obviousness-type double patenting rejection is premised on a common embodiment. There is no statutory basis for this improper interpretation of obviousness-type double patenting.

The Examiner's "same embodiment" basis for obviousness-type double patenting is erroneous for at least the following reasons. First, two claims in two separate applications may find support in the same embodiment while claiming inventions that are patently distinct. An embodiment as described by a common specification and drawings may fully disclose a wide range of details and limitations. However, it may not follow that separate claims, which are supported by a common embodiment, are also identical in scope, as assumed by the Examiner. Second, by relying on a common embodiment, the Examiner has improperly treated the specification as prior art. Finding a claimed invention to be an obvious variation of patented claims by treating the patent disclosure

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<sup>16</sup> *Id.*

<sup>17</sup> *Id.* citing *In re Aldrich*, 398 F.2d 855, 859, 158 USPQ 311, 314 (CCPA 1968).

as though it is prior art has been repeatedly held as impermissible.<sup>18</sup> The use of an applicant's invention disclosure as prior art against him is improper.<sup>19</sup> By broadly rejecting pending claims under obviousness-type double patenting without analyzing the claims of the inventions, the Examiner has misapplied and confused the law of obviousness-type double patenting.

**(b) Proper Use of Specification**

Because the obviousness-type double patenting rejection requires claim interpretation, the Examiner may use the specification in a limited capacity to assist in interpreting what the claim language defines. The patent disclosure cannot be used as prior art, but the disclosure can be used to (1) determine the meaning of terms in a claim and may also be used as required to (2) answer the above question, "whether the claim in the application defines merely an obvious variation of the invention disclosed and claimed in the patent."<sup>20</sup> With respect to "the invention disclosed and claimed in the patent," the Federal Circuit stated in *Vogel*,

We recognize that it is difficult, if not meaningless, to try to say what is or is not an obvious variation of a claim. A claim is a group of words defining only the boundary of the patent monopoly....The disclosure, however, sets forth at least one tangible embodiment within the claim, and it is less difficult and more meaningful to judge whether that thing has been modified in an obvious manner. It must be noted that this use of the disclosure is not in contravention of the cases forbidding its use as prior art, nor is it applying the patent as a reference under 35 U.S.C. § 103, since only the disclosure of the invention claimed in the patent may be examined.<sup>21</sup>

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<sup>18</sup> *In re Kaplan*, 229 USPQ at 683.

<sup>19</sup> *Id.*

<sup>20</sup> *In re Vogel*, 422 F.2d at 441.

<sup>21</sup> *Id.*, 422 F.2d at 442.

Therefore, it is proper to identify the invention claimed in the patent by using *exclusively only the portion(s) of the disclosure supporting the claimed invention.*

Alternately, it is improper to make a double patenting rejection when the rejection relies on specification support other than the specific portion(s) of the disclosure supporting the claimed invention.

It has been repeatedly held that use of disclosure of a patent cited in support of a double patenting rejection cannot be used as through it were prior art, even where the disclosure is found in the claims. *See, e.g., Braat*, 937 F.2d at 594 n.5, 19 U.S.P.Q. at 1293 n.5 (“The patent disclosure must not be used as prior art”); *Vogel*, 422 F.2d at 442, 164 USPQ at 622 (in considering obviousness-type double patenting, “the patent disclosure may not be used as prior art”); *In re Plank*, 399 F.2d 241, 242, 158 U.S.P.Q. 328, 329 (C.C.P.A. 1968) (“Its claims are used as the basis for a double patenting rejection. It is not a prior art reference”); *In re Aldrich*, 398 F.2d 855, 859, 158 U.S.P.Q. 311, 314 (C.C.P.A. 1968) (“[P]atent claims are looked to only to see what has been patented, the subject matter which has been protected, not for something one may find to be disclosed by reading them.”)

In the instant case, the Examiner has improperly relied on the specification in making the obviousness-type double patenting rejection. Whether support is provided for the claim language is an issue separate from the scope of the claims in the determination of a double patenting rejection. The Examiner has confused the issue of claim support with the issue of claim interpretation in determining whether obviousness-type double patenting exists. Claim interpretation is limited to what the claim language defines as the

scope of the invention. By doing so, the Examiner has relied on specification support other than the specific portions of the disclosure supporting the claimed invention. Applicants have failed to follow the mandates as expressed in the M.P.E.P. thereby failing to establish a *prima facie* case of double patenting of the obviousness-type.

According to *In re Vogel*, one must first “determine how much of the patent disclosure pertains to the invention claimed in the patent” because only “[t]his portion of the specification supports the patent claims and may be considered.” The Examiner has disregarded this critical step in his analysis of the obviousness-type double patenting rejection.

**(c) Best Mode**

The scope of the invention is determined by the claim language. The best mode disclosed in the specification as interpreted by the Examiner does not define the boundaries of the claims when determining double patenting of the obviousness-type. Examiner has again improperly relied on the specification to interpret the scope of the invention while failing to analyze the pending claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claims and those in the issued Harvey patents.

In *In re Schneller*, 397 F.2d 350, 158 U.S.P.Q. 210 (C.C.P.A. 1968), the Schneller patent disclosed elements A, B, C, X, and Y as the best mode and claimed A, B, C, and X which covered other features incorporated in the claim because of the term “comprising”, thus effectively covering the combination A, B, C, X, and Y. The later filed application claimed elements A, B, C, and Y and elements A, B, C, X, and Y. Thus, making the new combination would merely exercise skill or ingenuity expected of a person with ordinary skill in the art because X and Y were both known in the art.

The court in *In re Schneller* noted the uniqueness of the factual circumstances surrounding the element composition of the application which involved the substitution of element X for element Y, rather than the addition or subtraction of an element from the patent's claims.<sup>22</sup> The court went on to state that "[this] is not a case of an improvement or modification invented after filing . . . Hence it is not the usual 'obviousness-type' double patenting case."<sup>23</sup> Thus, the court limited the applicability of this holding. The Examiner has not offered any proof that *Schneller's* use of the disclosed best mode may be properly applied to the facts of the instant application. More specifically, the instant case does not involve the substitution of one element (X) for another element (Y) where the rest of the claimed subject matter (ABC) is well known and where the two elements (X and Y) are also known in the art.

While *In re Schneller* relied on a disclosed best mode of ABCXY in finding a non-statutory double patenting rejection, the Examiner's use of a best mode to find all variations obvious is unwarranted. An allegation of an improper extension of a unified system monopoly cannot be supported without examining the scope of the claims. In *In re Schneller*, the court specifically cited and analyzed both the claims in the patent and the elements in the claims in the *Schneller* application. The court then clearly demonstrated how the claims in the patent read on the claims in the application to support the double patenting rejection. The Office Action fails to provide such an analysis.

**(d) Means Plus Function**

In interpreting "means plus function" language, the Federal Circuit held *In re Lonardo*, 119 F.3d 960, 43 U.S.P.Q.2d 1262 (Fed. Cir. 1997) that under 35 U.S.C. § 112, sixth paragraph<sup>24</sup>, correct interpretation of the means plus function element must be in

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<sup>22</sup> 397 F.2d at 353-54.

<sup>23</sup> *Id.*

<sup>24</sup> See *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1849 (Fed. Cir. 1994).

light of the disclosed structure for implementing the function, and in a manner that is expressly recited in the claim.<sup>25</sup> The PTO must apply 35 U.S.C. §112, sixth paragraph, in appropriate cases, and give claims their broadest reasonable interpretation in light of and consistent with the written description of the invention in the application.<sup>26</sup>

**(2) Establishing Variations between the Invention Claimed  
and the Invention Defined in the Patent Claims**

Based on the proper identification of each of the inventions, *supra*, the Examiner then must identify the variation(s) between the inventions being claimed in the application and the invention as defined by the claims in the patent.

As discussed above, the Examiner has not properly identified the inventions. In fact, the Examiner has failed to analyze and interpret the claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claims and those in the issued Harvey patents. Rather, in an attempt to address the variations between the inventions, the Examiner provides broad allegations that “no pending claim is more than an obvious variation...” (Office Action at 234.) However, the Examiner has failed to specifically identify these variations. Such blanket assertions do not fulfill the requirement of identifying variations between the invention claimed and the invention defined by the patent claims, as mandated by the M.P.E.P.

As to paragraph 23, the Examiner presents a weak attempt at establishing variations between the invention claimed and the invention defined in the patent claims. More specifically, the Examiner states that “[t]he differences are suggested ... by the art above.” (Office Action at 234.) The Examiner erroneously believes that incorporating any differences merely **suggested** (and not necessarily explicitly stated) by any and all prior art discussed throughout entire Office Action is proper. The Examiner is required to

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<sup>25</sup> *In re Lonardo*, 43 USPQ2d at 1267.

<sup>26</sup> *In re Donaldson*, 16 F.3d at 1194.



identify the variations between the inventions being claimed and the invention as defined by the patent claims. Placing the burden on Applicants to sift through the Office Action to locate any and all discussions of the differences suggested, explicitly and/or implicitly, by the prior art is contrary to law. There is no statutory basis for Examiner's version of identifying variations between the sets of claims at issue.

Applicants provide Appendix B herewith, which identify Applicants' patentable subject matter of the instant claims over specific Applicants' patented claims in response to Appendix A of the Office Action.

**(3) Variations Would Have Been Obvious to a Person of Ordinary Skill in the Art**

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966) that establish a background for determining obviousness under 35 U.S.C. § 103 are employed when making an obviousness-type double patenting analysis. However, the "patent principally underlying the double patenting rejection is not considered prior art."<sup>27</sup> The factual inquiries are summarized as follows:

- (A) Determine the scope and content of the patent claim and the prior art relative to the claim in the application at issue;
- (B) Determine the differences between the scope and content of the patent claim and the prior art as determined in (A) and the claim in the application at issue;
- (C) Determine the level of ordinary skill in the pertinent art; and
- (D) Evaluate any objective indicia of nonobviousness.<sup>28</sup>

Additionally, the Federal Circuit held in *Kaplan* that obviousness-type double patenting rejections must include clear evidence to establish why an alleged variation of an invention claimed in a prior patent would have been obvious.

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<sup>27</sup> *In re Longi*, 759 F.2d at 892, n.4 (citing *In re Braithwaite*, 379 F.2d 594, 600 n.4, 54 CCPA 1589, 154 USPQ 29 (CCPA 1967)).

<sup>28</sup> M.P.E.P. § 804 (II) B (1).

[T]here must be some clear evidence to establish why the variation would have been obvious which can properly qualify as "prior art." Even if obviousness of the variation is predicated on the level of skill in the art, prior art evidence is needed to show what the level of skill was.<sup>29</sup>

Otherwise, if no clear prior art evidence establishes that the variation(s) in the application claims are obvious over the invention defined by the claims of the patent, one can assume that the characteristic of the claims including the variation(s),

appear that the invention covered by the later patent was a separate invention, distinctly different and independent from that covered by the first patent; in other words, it must be something substantially different from that comprehended in the first patent. It must consist in something more than a mere distinction of the breadth or scope of the claims of each patent.<sup>30</sup>

As discussed above, the Examiner has failed to properly identify the inventions as claimed and has further failed to identify the variations as required for a proper obviousness-type double patenting rejection. Nonstatutory double patenting is intended to prevent prolongation of the patent term by prohibiting the extension of patent monopolies in successive patents. While the prohibition of extending patent monopolies is a policy concern, a statement of motivation for establishing obviousness under 35 U.S.C. § 103 is nevertheless lacking. Because Examiner has not provided any evidence that establishes that the variations are obvious over the invention as defined by the claims, the claims of the instant application may be assumed to be a separate and distinct invention.

Under paragraph 30, in an attempt to address the obviousness of the variations, the Examiner states that "[t]he provision of any such differences would have been obvious for the benefit of providing greater functionality to the user" (Office Action at

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<sup>29</sup> *Id.* at 683.

<sup>30</sup> *Miller v. Eagle Mfg. Co.*, 151 U.S. at 198.

144.) The Examiner provides a single statement of motivation to address any differences without positively identifying the differences.

This statement lacks the proper motivation for establishing obviousness under 35 U.S.C. § 103 for at least the following reasons. First, “for the benefit of providing greater functionality to the user” does not answer the question of whether the differences would have been obvious to one of ordinary skill in the art. This attempt at providing motivation fails to take into consideration the level of ordinary skill at the time of the invention. To determine whether greater functionality provides adequate motivation, the Examiner should take into consideration (among other things) the level of ordinary skill in the art, as expressly provided in M.P.E.P § 804 (II)B(1) and *Graham v. John Deere Co.*<sup>31</sup> A proper motivation statement takes into consideration what would have been obvious to someone with ordinary skill in the art at the time of the invention. Without this determination, a modification cannot be deemed obvious for “greater functionality”. Examiner attempts to provide the level of ordinary skill in the art on pages 123-128. However, the Examiner nevertheless fails to provide a teaching as to how the differences would have been obvious. A variation may not be assumed to be obvious merely because greater functionality is alleged to be provided. The Examiner has failed to provide a proper statement of motivation.

Second, Examiner’s statement of motivation is overly broad. The statement of “greater functionality to the user” does not adequately provide a teaching to one of ordinary skill in the art. According to the Examiner’s reasoning, any and all differences between sets of claims, whether novel or not, will be considered obvious due to “greater functionality”. The Examiner’s version of motivation is improper and erroneous.

Third, while a variation provides “greater functionality”, it may also be considered novel and non-obvious. For example, while an improvement on a widget

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<sup>31</sup> 383 U.S.1, 148 USPQ 459 (1966).

provides "greater functionality", the improvement may just as well be novel and therefore merit patent protection. Non-obvious improvements provide "greater functionality" to the user. Likewise, a mere change in color may also provide greater functionality to the user. However, based on the level of ordinary skill in the art at the time of the invention, a mere color change may be considered to be an obvious variation. Because Examiner's version of motivation may be construed in two dynamically different ways, the motivation statement of providing "greater functionality to the user", as applied to "any such differences" is clearly deficient.

## **5. Conclusion**

The Examiner's basis for the double patenting rejections is inconsistent with the Patent Office Procedures found in the M.P.E.P. The Examiner has fatally misapplied and confused the established law of double patenting. The belief that if two claims in separate applications are supported by the same embodiment in the application's common specification as being a *prima facie* basis for obviousness-type double patenting rejections is not supported by the rules and procedures as set forth in the M.P.E.P. Furthermore, the Examiner has not cited any case law or any other authority, for that matter, for this erroneous basis.

To establish a proper obviousness-type double patenting rejection, the PTO must show that (1) the inventions claimed (2) are not patentably distinct and (3) are based on a *prima facie* showing of obviousness. According to § 804 of the M.P.E.P., any obviousness-type double patenting rejection should make clear the differences between the inventions defined by the conflicting claims; and the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent. As discussed above,

the Examiner has not identified the claimed inventions; established variations; or shown that variations would have been obvious to a person of ordinary skill in the art.

Therefore, the Examiner has failed to properly establish a *prima facie* basis for a double patenting rejection of the obviousness type. Applicants respectfully request withdrawal of the rejection of all pending claims.

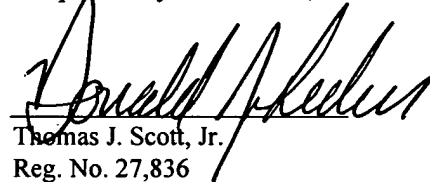
### III. CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, all pending claims are patentably distinguishable over the prior art of record, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

Date: September 29, 2000  
**HUNTON & WILLIAMS**  
1900 K Street, N.W.  
12<sup>th</sup> Floor  
Washington, D.C. 20011

Respectfully submitted,



Thomas J. Scott, Jr.  
Reg. No. 27,836  
Donald J. Lecher  
Reg. No. 41,933  
Attorneys for Applicants  
Tel: (202) 955-1938

**APPENDIX A**

**SPECIFICATION SUPPORT**

**TO**

**PARENT 1981 APPLICATION**

**AND**

**INSTANT APPLICATION**

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
6. A method of generating and delivering an individualized mass medium programming presentation	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a receiver for receiving a mass medium programming signal,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 396 lines 8-10.  Page 445 line 24 to page 446 line 1.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
a computer for generating and communicating information, and	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 446 lines 17-21.  Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is



Claim Language	Reference	Language	Reference	Support to instant specification. Language
			<p>Page 26 lines 4-11.</p>	<p>preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
<p>one or</p>	<p>Column 19 lines 67 to column 20 line 2.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 451 line 3. Page 451 line 3. Page 26 lines 8-11.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
<p>more output devices operatively connected to said receiver and said computer for delivering</p>	<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor,</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
to a viewer mass medium programming and computer information, with			Page 446 lines 17-21.	202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
said computer comprising one or	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
more data storage locations, said method comprising the steps of:	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
storing	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
a timing signal and	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	<p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p> <p>Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
viewer interest identification data specifying a plurality of different viewer interests;	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.  The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...	
controlling said computer a first time based on a comparison of said timing signal or said viewer interest identification data to other data, said first step of controlling comprising:	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

(1) inputting into said computer further data	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	predetermined fashion.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
designating a viewer interest of said plurality of different viewer interests	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that <b>relate</b> to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
or a time;	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all <b>closing</b> stock prices applicable <b>that day</b> .	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all <b>closing</b> stock price data applicable <b>that day</b> and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				(Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
(2) selecting a plurality of signals, each selected signal including data,	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.

Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Reference	Support to instant specification. Language
mass medium programming, or	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
a control signal respecting said viewer interest; and	Column 18 lines 52-55.	The news services preceed each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-A T&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
(3) storing each selected signal at a storage location;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
	Column 18 lines 56-58.	... signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.		Page 420 lines 6-20.	microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".  ...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....
controlling said computer a second time	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...		Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of



Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification.	Language
	<p>Column 20 lines 5-7.</p>	<p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>		<p>signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
based on said comparison, said second step of controlling comprising:	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	on the efficiency of the employment of program instruction sets and combining synch commands.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
(1) selecting one or more computer programming instructions;	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or

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	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	<p>Page 26 line 4.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p>	<p>fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p>
(2) generating mass medium programming presentation information content in respect to a second viewer interest of said	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>

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plurality of different viewer interests; and	Column 19 lines 48-53.	<p>These signals instruct microcomputer, 205, to</p> <p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said</p>

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(3) preparing to communicate said generated mass medium programming presentation information content upon instruction;	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.			initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
				Page 27 lines 7-9 and  Page 451 line 22 to Page 452 line 5.	Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.  Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.  In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.
controlling said computer a third time	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks'		Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>based on said timing signal or said comparison, said third step of controlling comprising:</p>	<p>Column 18 lines 46-48.</p> <p>Column 19 lines 35-41.</p>	<p>performance ...</p> <p>... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p>	<p>Page 420 lines 3-6.</p> <p>Page 449 lines 13-35.</p>	<p>displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...</p> <p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p> <p>Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer,</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
(1) selecting a portion of said mass medium programming presentation information content;	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...		Page 26 lines 1-8.	205, to record said datum or data in a predetermined fashion.
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to		Page 23 line 35 to page 24 line 16.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		generate several graphic video overlays, ...		Page 451 lines 7-11.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set, 202,		Page 26 lines 4-8.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
					Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(2) selecting a location; and			upon command.	Page 44 lines 14-17.  Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
		Column 19 lines 64-66.  Column 19 lines 31-34.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...  FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 26 lines 1-8.  Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the



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					<p>aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs the microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
(3) communicating said selected mass medium programming presentation information content to said selected location; and	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
presenting to a subscriber at a controlled time said mass medium programming with said generated mass medium programming presentation information content, with said mass medium programming and said generated mass medium programming presentation	Column 19 line 30.	Co-ordinating Multimedia Presentations in Time	See generally page 447 line 25 to page 457 line 10.		Controlling Computer-based Combined Media Operations

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information content being outputted to said subscriber either as a combined or	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
sequential presentation at an output device or	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 451 line 3.  Page 27 lines 7-9 and  Page 451 line 22 to Page 452 line 5.	And the Fig. 1C combining is displayed.  Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.  Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the

Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Reference	Support to instant specification. Language
as parallel presentations at a plurality of output devices.	<p>Column 19 line 67 to column 20 line 1.</p> <p>Column 19 lines 27-29.</p> <p>Column 18 lines 65-67.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p> <p>... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...</p>	<p>Page 26 lines 8-11.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 426 lines 10-18.</p>	<p>portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&amp;T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&amp;T news item.)</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification.
Reference	Language	Reference
Language	Language	Language

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7. A method of generating and delivering an individualized mass medium programming presentation	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 451 line 3.  Page 390 lines 30-35.	And the Fig. 1C combining is displayed.  Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a receiver for receiving a mass medium programming signal,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 396 lines 8-10.  Page 445 line 24 to page 446 line 1.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
a computer for generating and communicating information, and	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his	Page 446 lines 17-21.  Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of

Claim Language		Support to parent application filed November 3, 1981.	Language	Reference	Language	Support to instant specification.
			own stocks' performance overlay the studio generated graphic.			signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
					Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
one or		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3.	And the Fig. 1C combining is displayed.
					Page 451 line 3.	And the Fig. 1C combining is displayed.
					Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
more output devices		Column 19 lines 27-29.	...and also microcomputer, 205, may		Page 445 line 24 to	... instructions causes controller, 20, to switch

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
operatively connected to said receiver and said computer for delivering to a viewer mass medium programming and computer information, with		instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	page 446 line 1.	power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
said computer comprising one or	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
more data storage locations, said method comprising the steps of:	Column 19 lines 39-41.	[Microcomputer, 205,] records those	Page 449 lines 13-20.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
				Each weekday after 4:30 PM, a remote

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
			prices that relate to the stocks in its stored portfolio.		stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
storing	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.		Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
a timing signal and	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well



Claim Language	Support to parent application filed November 3, 1981, Reference	Support to instant specification, Language
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a plurality of identification signals specifying different viewer interests;	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.  The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
controlling said computer a plurality of times, each time based on a comparison of said timing signal or identification signals to other data, said first step of controlling comprising each time:	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer,

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language

				205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
(1) inputting further data	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
designating a viewer interest of said different viewer interests or	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
a time;	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
(2) selecting a signal, each selected signal including data,	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.
		apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)	
		Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or	

Claim Language	Support to parent application filed November 3, 1981	Reference	Language
		Reference	Language

information content, or	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.  data in a predetermined fashion. Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
a control signal respecting mass medium programming; and	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.  Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
(3) storing each selected signal at a storage location,	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
	<p>several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p> <p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>	<p>Column 20 lines 5-7.</p>	<p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 27 lines 7-9 and</p> <p>Page 451 line 22 to Page 452 line 5.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
based on said comparison, said second step of controlling comprising:		Column 19 lines 39-41.			<p>York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>
		Column 19 lines 67 to column 20 line 1.	<p>[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 449 lines 13-20.</p> <p>Page 26 lines 8-11.</p>	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>
	(1) selecting one or more computer programming instructions;	Column 19 lines 60-65.	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...</p>	<p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
		and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Said signal instructs microcomputer, 205, ...
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
		Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Microcomputer, 205, evaluates the initial



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(2) generating mass medium programming presentation information content with respect to a second viewer interest; and				Page 451 lines 7-9.	signal word or words which instruct it to ... ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to  generate several graphic video overlays, ...  and to transmit these overlays to TV set, 202,		Page 23 line 35 to page 24 line 16.  Page 451 lines 7-11.  Page 26 lines 4-8.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		upon command.	Page 44 lines 14-17.  Page 26 lines 20-28.	<p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p>
(3) preparing to communicate said generated mass medium programming presentation information content upon instruction;	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 27 lines 7-9 and  Page 451 line 22 to Page 452 line 5.	<p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information</p>

Claim Language	Support to parent application, filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
controlling said computer	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.
based on said timing signal or said comparison, said third step of controlling comprising:	Column 18 lines 46-48.  Column 19 lines 35-41.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.  Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 420 lines 3-6.  Page 449 lines 13-35.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.  Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T & T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
(1) selecting a portion of said mass medium programming presentation information content;	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit <b>the first</b> overlay to TV set, 202,...	Page 26 lines 1-8:	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		and to transmit these overlays to TV set, 202,  upon command.	Page 26 lines 4-8.  Page 44 lines 14-17.  Page 26 lines 20-28.	<p>instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p>
(2) selecting a location; and	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 26 lines 1-8.	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
	Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				page 450 line 27 to page 451 line 11.	<p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
(3) communicating said selected mass medium programming presentation information content to said selected location; and	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 4-10.	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...</p>
presenting to a subscriber at a controlled time said	Column 19 line 30.	Co-ordinating Multimedia Presentations in Time		See generally page 447 line 25 to page 457 line 10.	Controlling Computer-based Combined Media Operations

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
	Reference	Language

mass medium programming with said generated mass medium programming presentation information content, with said mass medium programming and said generated mass medium programming presentation information content being outputted to said subscriber either as a combined or	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
sequential presentation at an output device or	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 451 line 3. Page 27 lines 7-9 and Page 451 line 22 to Page 452 line 5.	And the Fig. 1C combining is displayed. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions. Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be





Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
8. A method of generating and delivering an individualized mass medium programming presentation	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification.	Language
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
a receiver for receiving a mass medium programming signal,	Column 19 lines 27-29.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 451 line 3. Page 390 lines 30-35.  Page 396 lines 8-10.  Page 445 line 24 to page 446 line 1.	And the Fig. 1C combining is displayed.  Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	
	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance			

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a computer for generating and communicating information, and	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	with said audio ...  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
			Page 451 line 3.	And the Fig. 1C combining is displayed.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
one or  more output devices operatively connected to said receiver and said computer for delivering to a viewer mass medium programming and computer information, with	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	
said computer comprising one or	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer,	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
more data storage locations, said method comprising the steps of:		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	<p>221, in a predetermined fashion, to print said AT&amp;T news item. (Said preprogrammed cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&amp;T news item.)</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p>
storing		Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
a timing signal and		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the

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identification data, each identification datum specifying a plurality of different viewer interests;	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	<p>AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...</p>
controlling said computer a first time based on a comparison of said timing signal or identification data to other data, said first step of controlling comprising:	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(1) inputting to said computer data		Column 19 lines 35-37.			Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
		Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.		Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
designating a viewer interest of said plurality of different viewer interests or		Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that

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		Reference	Language	Reference	Language
a time;		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable <b>that day</b> .	Page 449 lines 13-26.	<p>apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all <b>closing</b> stock price data applicable <b>that day</b> and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>
(2) selecting a first signal, each selected first signal including data,		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a <b>data</b> service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price <b>data</b> applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or <b>data</b> that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price <b>data</b> and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for</p>



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		Reference	Language	Reference	Language
information content, or		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	<p>example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>
a control signal respecting a mass medium programming presentation; and		Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	<p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular A T&amp;T news item in a particular Transmit-A T&amp;T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ...</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
(3) storing each selected first signal at a storage location;	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	Column 18 lines 56-58.	... signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.		Page 420 lines 6-20.	The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".  ...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....
controlling said computer a second time	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,		Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Language
	<p>several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p> <p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p> <p>Column 20 lines 5-7.</p>	<p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 27 lines 7-9 and</p> <p>Page 451 line 22 to Page 452 line 5.</p>
		<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.		
Reference	Reference	Language	Reference	Language
<p>based on said comparison, said second step of controlling comprising:</p>	<p>Column 19 lines 39-41.</p>	<p>[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 449 lines 13-20.</p> <p>Page 26 lines 8-11.</p>	<p>York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>
<p>(1) inputting data designating a second viewer interest of said plurality of different viewer interests or</p>	<p>Column 19 lines 18-20.</p>	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 3 lines 6-8.</p> <p>Column 19 lines 5-8.</p>	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.</p>	<p>Page 268 line 28 to page 269 line 12 from example #5.</p> <p>Page 14 line 35 to page 15 line 2.</p> <p>Page 428 lines 21-26.</p>	<p>microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of a available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a time;	Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening. ...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
(2) selecting a second signal, each selected second signal including information content or a control signal respecting	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
a mass medium programming presentation; and	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information,

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
				<p>by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>	
(3) communicating each selected second signal to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 445 line 24 to page 446 line 1.</p> <p>Page 451 line 3.</p> <p>Page 446 lines 17-21.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>		

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
a processor and a storage location;	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 24 lines 5-6.  Page 451 lines 7-9.  Page 426 lines 10-18.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	
controlling said	Column 19 line 64 to	This signal instructs microcomputer, 205,	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
computer a third time		column 20 line 1.	to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
based on said comparison, said third step of controlling comprising:		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
(1) inputting data designating		Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
		Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a third viewer interest or a time;	Column 19 lines 59-60.	sequentially in audio. Then the host says, "And here is what your portfolio did."  <b>At this point</b> , an instruction signal is generated in the television studio originating the programming ...	Page 25 lines 33-34.  Page 59 lines 29-33.	Then the host says, "And here is what your portfolio did."  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  <b>At this point</b> , an instruction signal is generated at said program originating studio, ...  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.	
	Column 19 lines 60-62.				
(2) selecting a third signal, each selected third signal including	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 19 lines 64-66.		Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(3) communicating each selected third signal to one of a processor and		Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,		art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
		Column 19 lines 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer	Page 26 lines 1-8.  Page 37 line 26 to page 38 line 8.  Page 26 lines 4-10.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
		generated graphic of his own stocks' performance ...		monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
presenting to a subscriber said mass medium programming with said mass medium programming presentation information content, with said mass medium programming and said said mass medium programming presentation information content being outputted to said subscriber either as a combined or	Column 19 line 30.	<b>Co-ordinating Multimedia Presentations in Time</b>	See generally page 447 line 25 to page 457 line 10.	<b>Controlling Computer-based Combined Media Operations</b>
	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
sequential presentation at an output device or	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 451 line 3.  Page 27 lines 7-9 and	And the Fig. 1C combining is displayed.  Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			Page 451 line 22 to Page 452 line 5.	Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient. In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
as parallel presentations at a plurality of output devices.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	<p>Page 446 lines 17-21.</p> <p>Page 426 lines 10-18.</p>	<p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A T&amp;T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A T&amp;T news item.)</p>
9. A method of delivering a mass medium programming presentation	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the	<p>Page 451 line 3.</p> <p>Page 390 lines 30-35.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a receiver for receiving a mass medium programming signal,		Column 19 lines 27-29.	signal apparatus and methods described here can permit.  ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 396 lines 8-10.  Page 445 line 24 to page 446 line 1.	persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	programmable apparatus for controlling delivery of information, and	Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to ...	Page 446 lines 17-21.  Page 450 lines 31-32.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  ... caused his microcomputer, 205, to be preprogrammed as described above; ...  Microcomputer, 205, is preprogrammed to ... respond ... to ...
	one or	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 21 lines 20-23.  Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor,





Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.	
		Reference	Language	Reference
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.
storing a timing signal and		Column 19 lines 5-9.	... microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast. Microcomputer, 205, is preinformed of the time of cablecasting.	Page 428 lines 21-26.
signal identification data designating a specific signal		Column 9 lines 47-57.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 437 lines 1-3.  Page 248 line 17 to page 249 line 5.
			Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	
			The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.	
			Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.	
			Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.	
			Said detection-complete information causes	Page 257 line 24 to

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>page 258 line 19.</p> <p>Page 257 line 24 to page 258 line 19.</p> <p>Page 265 line 27 to Page 266 line 21.</p>	<p>controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator,</p>

Claim Language	Support to parent application filed November 23, 1981	Reference	Language	Support to instant specification	Language
				6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.	
	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.			Page 250 lines 13-17.  Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...  ... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.	
				Page 251 lines 8-11.  Page 263 lines 19-24.	
				Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
	Column 9 lines 57-63.		The [controller, 20,] will control buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decrypter, 10, and	Page 146 line 31 to page 147 line 3.	Said failures to match cause the controllers, 20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to

Claim Language	Reference	Support to parent application filed November 3, 1981 Language	Reference	Support to instant specification. Language
		processor or monitor, 12, as required, and to perform such other functions as buffer/comparator, 8, performs.	<p>Page 258 lines 17-25.</p> <p>Page 260 lines 5-13.</p> <p>Page 147 lines 29-31.</p> <p>Page 149 lines 17-20.</p> <p>Page 149 lines 27-29.</p>	<p>commence processing in the conventional fashion.)</p> <p>... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".)</p> <p>Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;</p> <p>Next said decrypt-a-00-header-message instructions cause controller, 20, to cause buffer/comparator, 8, to transfer to decryptor, 10, a quantity of signal words of said binary information of the second message ...</p> <p>Decryptor, 10, commences receiving said information, decrypting it using said key J</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
kind;	Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 317 lines 2-6.	information and transferring it to controller, 12, ... If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	
controlling said receiver station a first time based on said step of storing, said first step of controlling comprising:	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.  Page 24 lines 5-6.  Page 451 lines 7-9.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...	
(1) selecting a first signal, each selected	Column 19 lines 46-48.	... several instruction signals are identified by decoder, 203, and transferred to	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
first signal including datain respect of mass medium programming presentation; and			microcomputer, 205.	Page 37 line 26 to page 38 line 8	<p>said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>
	(2) inputting each selected first signal to said programmable apparatus in order to program said programmable apparatus to respond to a	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a</p>
		Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 14 lines 6-14.</p> <p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to</p>	<p>"program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.</p> <p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or</p>
specific signal kind;	<p>Column 4 lines 18-25.</p> <p>Column 19 lines 60-66.</p>	<p>In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>		



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
controlling said receiver station a second time				page 38 line 8.	47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Column 19 lines 15-20.	Signal processor, 200, receives this instruction from microcomputer, 205, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.		Page 288 lines 16-20.  Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.  In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st-and 3rd-new- program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205.

Claim Language	Support to parent application filed November 3, 1981	Language	Reference	Support to instant specification.	Language
<p>based on said step of storing, said second step of controlling comprising:</p>	<p>Column 9 lines 47-57.</p>	<p>The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Page 248 line 17 to page 249 line 5.</p>	<p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless</p>	

Claim Language	Reference	Language	Reference	Support to instant specification. Language
			<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 257 line 24 to page 258 line 19.</p> <p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p> <p>Page 265 line 27 to</p>	<p>channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p> <p>Page 146 line 31 to</p>	<p>causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Said failures to match cause the controllers,</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification.	
Reference	Reference	Reference	Language
	<p>buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decrypter, 10, and processor or monitor, 12, as required, and to perform such other functions as buffer/comparator, 8, performs.</p>	<p>page 147 line 3.</p> <p>Page 258 lines 17-25.</p> <p>Page 260 lines 5-13.</p> <p>Page 147 lines 29-31.</p> <p>Page 149 lines 17-20.</p>	<p>20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to commence processing in the conventional fashion.)</p> <p>... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".)</p> <p>Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;</p> <p>Next said decrypt-a-00-header-message instructions cause controller, 20, to cause buffer/comparator, 8, to transfer to decryptor, 10, a quantity of signal words of said binary</p>

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
		Reference	Language
			information of the second message ...
		Page 149 lines 27-29.	Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, ...
(1) selecting a second signal, each selected second signal including	Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
		Page 257 line 24 to page 258 line 19.	Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.
		Page 265 line 27 to Page 266 line 21.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
an information content portion and a control portion respecting a mass medium programming presentation; and	Column 19 line 53-56.  Column 4 lines 18-25.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.  In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.	Page 25 lines 26-33.  Page 14 lines 6-14.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.  In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.
(2) communicating at least said control portion of each selected second signal to said programmable apparatus;	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling said receiver station a third time based on said step of storing, said third step of controlling comprising:					functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
	controlling said receiver station a third time based on said step of storing, said third step of controlling comprising:	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.  Then, in a predetermined fashion, microcomputer, 205, may	Page 436 line 9 to page 437 line 6.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance. Determining a match causes microcomputer, 205, automatically to input



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
		<p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p> <p>and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p> <p>and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance</p>

<p>(1) identifying a third signal, each identified third signal being of a mass medium programming signal kind; and</p>	<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 267 lines 20-28 from example #5.</p>	<p>with said audio ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-radio-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is</p>
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Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Language

			<p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
		Page 439 lines 14-15.	
(2) communicating each identified third signal to one of said one or more output devices;	Column 19 lines 23-29.	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
		Page 295 lines 6-8.	
		Page 439 lines 9-15.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
				Page 445 lines 24-27.	... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...
				Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
				Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
				Page 445 line 35 to page 446 line 1.	... and to tune monitor, 202M, in a predetermined fashion.
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
controlling said receiver a fourth time	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information,



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(1) communicating to said programmable apparatus a fourth signal each communicated fourth signal being of a kind other than a mass medium programming signal; and		Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 446 lines 17-21.	202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
				Page 25 line 33 to page 26 line 2..  Page 37 line 26 to page 38 line 8.	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
(2) communicating mass medium programming presentation information content to one of said one or more output devices in response to each communicated fourth signal; and	Column 19 line 64 to column 20 line 1.  Column 18 lines 65-67.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  ... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...		Page 26 lines 4-10.  Page 426 lines 10-18.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
presenting to a subscriber a mass medium programming with said mass medium programming presentation information content, with said mass medium programming and said mass medium programming presentation content	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language	Language	Language

information content being outputted to said subscriber either as a combined or sequential presentation at said one of said one or more output devices.	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...

10. A method of generating and delivering an individualized mass medium programming presentation at a receiver station, said receiver station having	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 451 line 3.  Page 390 lines 30-35.  Page 396 lines 8-10.	And the Fig. 1C combining is displayed.  Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
a receiver for receiving a mass medium programming signal,	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
a computer for generating and communicating information, and	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
one or	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
more output devices operatively connected to said receiver and said computer for delivering to a viewer a mass medium programming and computer	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 451 line 3.  Page 426 lines 10-18.	And the Fig. 1C combining is displayed.  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A T&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
information, with		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
more data storage locations, said method comprising the steps of:		Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
storing a timing signal and		Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
a plurality of a first data,		Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
each first datum designating a different type of signal;		Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	
Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.	
		Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)	Page 449 lines 13-26.
Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	Page 426 lines 10-18.
Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203,	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer,	Page 25 line 34 to page 26 line 2.

		and transferred via processor, 204, to microcomputer, 205.	Page 37 line 26 to page 38 line 8.	205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.  The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
controlling said computer	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205.

Claim Language	Support to parent application filed November 3, 1981	Reference	Support to instant specification	Language
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based on a comparison, said first step of	Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words	Page 436 line 9 to page 437 line 3.	<p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
	Page 439 lines 14-15.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10;	Page 31 lines 10-18.	

Claim Language		Support to parent application filed November 3, 1981	Support to instant specification.
		Reference	Language
controlling comprising:		and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a predetermined fashion, the external equipment to which the signal or signals are <b>addressed</b> and passes them to appropriate jack ports for external transmission.	analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are <b>addressed</b> and transfers them to the appropriate port or ports for external transmission.
	(1) selecting a first signal, each selected first signal including	Column 9 lines 47-57.  The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.  Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...  Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the

Page 248 line 17 to  
page 249 line 5.

Page 257 line 24 to  
page 258 line 19.

Claim Language	Reference	Language	Reference	Support to instant specification. Language
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	<p>predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week"</p>
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>		<p>Page 265 line 27 to Page 266 line 21.</p>	
			<p>Page 250 lines 13-17.</p>	

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language		

data,			<p>program which is the message of the first combining synchronizing command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>
	Column 6 lines 30-41.	Page 251 lines 8-11.  Page 263 lines 19-24.	
		Page 37 lines 26-28.	
		Page 29 lines 15-26.	
	Column 3 lines 6-8.	Page 14 line 35 to page 15 line 2.	



Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
information content, or	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.
a control signal respecting a mass medium programming presentation; and	Column 19 lines 43-44.  Column 19 lines 27-29.	... instruction signals embedded in the "Wall Street Week" programming transmission.  ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 21 lines 23-24.  Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.
(2) storing each selected first signal at a storage location; controlling said computer based on said comparison, said second step of	Column 19 lines 20-23.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.  ... instruction signals embedded in the "Wall Street Week" programming transmission.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
controlling comprising:			<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language	Language	Language

				<p><b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
(1) selecting a second signal, each selected second signal including	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 436 line 9 to page 437 line 6.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
information content or	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 439 lines 9-15.  Page 295 lines 6-8.  Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
a control signal respecting a mass medium programming presentation; and	Column 3 lines 6-8.  Column 19 lines 43-44.  Column 19 lines 27-29.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  ... instruction signals embedded in the "Wall Street Week" programming transmission.  ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 14 line 35 to page 15 line 2.  Page 21 lines 23-24.  Page 445 line 24 to page 446 line 1.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  ... instruction signals embedded in the "Wall Street Week" programming transmission.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Reference	Language
				a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 446 lines 17-21.	
(2) communicating each selected second signal to a processor or		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.		Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
	Column 19 lines 23-24.	Then, in a predetermined fashion, microcomputer, 205, may ...		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...	Page 437 lines 1-6.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
an output device;	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	
	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio.... Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...	
			Page 437 lines 1-6.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	
controlling said	Column 19 lines 45-		Page 439 lines 9-15.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...	
			Page 295 lines 6-8.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	
	Column 19 lines 45-	When the "Wall Street Week" transmission	Page 451 lines 6-7.	When the "Wall Street Week" transmission	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
computer based on said comparison, said third step of controlling comprising:	49.		begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 23 line 35 to page 24 line 4.	begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
				Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
(1) identifying a third signal,	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...	
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	

Claim Language	Support to parent application filed November 3, 1981	Language	Reference	Support to instant specification	Language
each identified third signal being a control signal designating a signal type; and	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	<p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-8.</p> <p>Page 422 line 23 to page 423 line 13.</p>	<p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>In due course, one instance of said Select-A-T&amp;T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39,</p>	
	Column 18 lines 58-67.	Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205. In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223,			



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
	to set cable converter box, 222, to the proper channel, and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.		of said decoder, 30. Receiving said Select-A-T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5. Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...	
			All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
			... causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.	
			In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 437 lines 1-6.	<p>station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&amp;T news.item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then ... to cause said unit, 256, to record said AT&amp;T news item.)</p>
				Page 426 lines 10-18.	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named</p>
(2) communicating each identified third signal to a processor or		Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
an output device;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor,</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	Column 15 lines 44-49.	Each decoder is likely to be located physically inside its associated player/recorder unit. Each is located at a point in the associated unit's circuitry where it receives every embedded signal on the programming channel or data channel to which the unit is tuned ...		<p>Page 314 lines 31-33.</p> <p>Page 315 lines 14-19.</p>	<p>202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p> <p>In the preferred embodiment, each one of said decoders is located at a point in the circuitry of its associated apparatus where said one receives (so as to detect all SPAM information on) the information of the selected frequency, channel or transmission to which its associated apparatus is tuned.</p>
controlling said computer based on said comparison, said fourth step of controlling comprising:	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or</p>

Claim Language	Support to parent application filed November 3, 1981	Language	Reference	Support to instant specification.	Language
		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	Page 26 lines 4-11.	<p>fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>	
(1) selecting a first signal or	Column 19 lines 48-53.	<p>These signals instruct microcomputer, 205, to</p> <p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p>	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Language

a timing signal; and	upon command.	Page 44 lines 14-17.  Page 26 lines 20-28.	monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes a subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...  Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
(2) generating or communicating some mass medium programming information content in response to a control signal; and	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 8-11.  Page 26 lines 1-8.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
presenting to a subscriber a mass medium programming with said mass medium programming	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>information content, with said mass medium programming and said mass medium programming information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.</p>	<p>Column 19 lines 59-60.</p>	<p>Then the host says, "And here is what your portfolio did."</p>	<p>Page 25 lines 33-34.</p>	<p>portfolio performance overlaid on the studio generated graphic.</p>	
	<p>Column 19 line 67 to column 20 line 1.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 8-11.</p>	<p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>	
	<p>Column 18 lines 65-67.</p>	<p>... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...</p>	<p>Page 426 lines 10-18.</p>	<p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&amp;T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&amp;T news item.)</p>	
	<p>Column 19 line 67 to column 20 line 1.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 8-11.</p>	<p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>	
<p>11. A method of providing data of interest to a receiver station from a remote data source,</p>	<p>Column 15 lines 20-25.</p>	<p>In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming</p>	<p>Page 311 line 33 to page 312 line 8.</p>	<p>And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.</p>	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
said data of interest for use at the receiver station in generating or outputting a receiver specific datum, said method comprising the steps of:	transmissions.		<p>Page 293 lines 32-35.</p> <p>Page 301 lines 6-9.</p> <p>Page 308 line 35 to page 309 line 3.</p> <p>Page 299 lines 13-25.</p>	<p>And for example, the transmitted programming ...</p> <p>At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....</p> <p>... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...</p> <p>At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...</p> <p>Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, ...</p> <p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...</p> <p>Automatically, controller, 20, transfers said</p>
	Column 14 lines 46-54.	<p>The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,</p> <p>in this case, is not located in the channel transmission.</p> <p>They may be preprogrammed into the signal</p>	<p>Page 298 line 34 to page 299 line 1.</p> <p>Page 299 lines 13-17.</p>	



	processor (for example,  in programable random access memory controller, 20, in Fig. 1)  or they may be transmitted in a channel other than the channel being transferred from box, 114.	<p>Page 298 line 33 to page 299 line 1.</p> <p>Page 293 line 20.</p> <p>Page 291 lines 10-20.</p>	<p>decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, ...</p> <p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...</p> <p>...such as, for example, the RAM of controller, 20; ...</p> <p>...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") ...</p> <p>... said "Wall Street Week" program when transmission of said program on cable channel 13 commences. ...</p> <p>...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system ...</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion; to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...</p>
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Claim Language	Support to parent application filed November 3, 1981. Reference	Support to instant specification. Language	Reference	Language
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storing data at said remote data source;	Column 15 lines 22-25.	... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 312 lines 6-8.	... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.
	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to- receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
		... can be reprogramed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language		Language

			<p>instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
receiving at said remote data source a query from said receiver station;	Column 15 lines 22-25.	... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	<p>with respect to page 555 line 24 to page 556 line 14.</p> <p>Page 312 lines 6-8.</p> <p>... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.</p>
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing some of said transmitted data;	Column 15 lines 22-25.	... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	<p>... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.</p> <p>Page 312 lines 6-8.</p>
transmitting from a second remote source to	Column 15 lines 20-22.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103,	<p>Page 311 lines 26-28.</p> <p>And for example, the transmitted programming may be processed through fewer</p>

Claim Language	Reference	Language	Reference	Support to instant specification. Language
<p>said receiver station a signal which controls said receiver station to</p>	<p>106, 109, and 112, could also operate in a predetermined fashion ...</p>	<p>The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programming uninterrupted may be embedded in the programming or may be elsewhere.</p>	<p>Page 311 line 33 to page 312 line 2.</p> <p>Page 293 lines 32-35.</p> <p>Page 301 lines 6-9.</p> <p>Page 308 line 35 to page 309 line 3.</p> <p>Page 291 lines 9-24</p>	<p>than three steps of decryption or more than three.</p> <p>And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating ...</p> <p>At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion ...</p> <p>... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...</p> <p>At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...</p> <p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... <i>on the frequency of said master control channel</i>. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Language

			<p>Page 289 lines 22-27</p> <p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p>
			<p>Page 290 lines 28-29</p> <p>particular <b>master cable control channel (that may or may not be cable channel 13)</b> from the multi-channel cable system</p>
			<p>Page 298 lines 17-21.</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p>
			<p>Page 299 lines 19-22.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...</p>
select and process an instruct signal	Column 19 lines 60-65.	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...</p>	<p>Page 25 line 33 to page 26 line 2.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p>
			<p>Page 37 line 26 to page 38 line 8.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in</p>

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
which is effective at said receiver station to coordinate presentation	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	Page 26 line 4.	
	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...		Said signal instructs microcomputer, 205, ...	Page 26 line 4.	
	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the	Page 26 lines 4-11.	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
of said data with a		Column 19 lines 48-53.			received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			These signals instruct microcomputer, 205, to	Page 451 line 3.	And the Fig. 1C combining is displayed.
			generate several graphic video overlays, ...	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			and to transmit these overlays to TV set, 202, upon command.	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
				Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
separate predetermined presentation sequence.		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 26 lines 20-28.  Page 25 lines 26-33.	or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
		Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
12. A method of communicating subscriber station information from a subscriber station to one or more remote data collection stations,		Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20.  Page 273 lines 4-6.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...  The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said method comprising the steps of:				Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
inputting a viewer's or participant's reaction at a subscriber station;	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...		Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
receiving at said subscriber station information that designates an instruct signal to process or an output to deliver in consequence of subscriber input;	Column 20 lines 27-37.	Five minutes later,  a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.  This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate		Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...  (An alternate method for inputting said second message to the microcomputers, 205,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
Language		Language		Language	
		channel to receive the recipe in encoded digital form			at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
				Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
		and instruct control means, 226, to activate printer, 221.		Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
determining the presence of said subscriber input at said subscriber station by processing said viewer's or participant's reaction;	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...		Page 472 lines 16-17.  Page 472 lines 27-32.	controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...  (At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Language

processing an instruct signal which is	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	and 203, ... Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
effective to coordinate presentation of data	Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...

Claim Language	Support to parent application filed November 3, 1981. Reference	Support to instant specification. Reference	Language
with a separate predetermined presentation sequence at said subscriber station	<p>Column 20 line 11.</p> <p>Column 20 lines 16-23.</p>	<p>Coordinating Print and Video</p> <p>Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of</p>	<p>memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p><b>Automating U. R. Stations ... Examples #9 and # 10 Continued</b></p> <p><b>Coordinating Computers, Television, and Print</b></p> <p>... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described</p>

Claim Language	Support to parent application filed November 23, 1981.	Support to instant specification.
Reference	Language	Language

in consequence of said step of determining; and		the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 470 lines 19-21.  Page 471 lines 6-13.	above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.  Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".  (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
	Column 20 lines 47-48.	... to decrypter, 224, for decryption ...	Page 478 lines 1-5.	
	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Language

	that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
	first, ordered	Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
		Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
		Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
		Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...
	and, second, delivered.	Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language	Language	Language

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13. The method of claim 12, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing a subscriber instruction to	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
			Page 95 lines 18-24.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ... So





Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
or computer control instructions; and	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p>	<p>an information segment that contains said <b>A T &amp; T news item</b>, and an end of file signal.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p>
receiving one or more specific mass medium programs, data, news items, or computer control instructions	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in accordance with said instruction.		Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 446 lines 17-21.  Page 428 lines 21-26.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
14. The method of claim 12, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing		Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
a subscriber instruction to		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
process or present one or more mass medium programs, data, news items, or computer control instructions in a specific fashion; and	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.  Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".	
processing or	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,  that site can determine for billing purposes that the recipe was,	Page 28 lines 25-35.  Page 44 lines 26-30.  Page 471 lines 26-31.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.  ... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...  Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and	

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
				transmits a particular first SPAM message that consists of ... meter-monitor information,....	Page 473 lines 3-8.	
	first, ordered			One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...  Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	Page 472 lines 23-27 with	
	and, second, delivered.			Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...	Page 471 lines 14-16.	
				Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	Page 473 line 29 to Page 474 line 1.	
presenting one or more specific mass medium programs, data, news items, or	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Column 20 lines 46-49.		One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...	Page 473 lines 3-13.	
				... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ...	Page 477 lines 12-17.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
computer control instructions in accordance with said instruction.	Column 20 lines 31-37.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.	<p>Page 477 lines 23-29.</p> <p>Page 478 lines 1-5.</p> <p>Page 475 lines 1-2.</p> <p>Page 471 line 26 to page 472 line 17.</p> <p>476 line 34 to</p>	<p>said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p> <p>... causes ... said decoder, 290, to detect and process properly the information of said second message.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Receiving said output information causes printer, 221, to print the information of said specific recipe and list.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said</p>

Claim Language	Support to parent application filed November 3, 1981. Référence	Support to instant specification. Language	Support to instant specification. Référence	Support to instant specification. Language
			<p>page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 474 lines 3-7.</p>	<p>second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p>
<p>15. The method of claim 12, wherein said information that designates a specific subscriber input or said instruct signal is detected in an</p>	<p>Column 20 lines 27-32.</p>	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator,</p>	<p>Page 471 line 26 to page 472 line 17.</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
information transmission from a data or programming source, said method further comprising the steps of:	225, ...	message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
programming a processor to respond to information communicated from a data or programming source;	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.
receiving an information transmission from a data or programming source;	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	<p>Figs. 2A-2C. Page 35 lines 1-6.</p> <p>Page 35 lines 16-18.</p> <p>Page 35 lines 27-30.</p>
		<p><i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.</p> <p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Language

			embedded in any other information portion of said television channel signal...
		Page 36 lines 1-3.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.
		Page 36 lines 18-20.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.
		Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
	Column 20 lines 16-19.	Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
		Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
		Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the
inputting at least some of said information transmission to a control signal detector;	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Language

	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 470 lines 19-21.  Page 471 line 35 to page 472 line 1.	particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.  At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
detecting data or an instruct signal in said information transmission; and	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
passing said detected data or instruct signal to said processor.	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 472 lines 4-12.  Page 37 line 26 to page 38 line 8.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

16. A method of controlling a remote intermediate transmitter station to communicate data to one or more receiver stations, with said remote intermediate transmitter	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
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Claim Language	Support to parent application, filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter,</p> <p>a data receiver,</p>	<p>Column 10 lines 43-47.</p> <p>Column 10 lines 41-43.</p> <p>Column 10 lines 30-39.</p> <p>Column 4 lines 26-28.</p>	<p>... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p> <p>... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...</p> <p>The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programing transmissions.</p> <p>Signals may also be transmitted on frequencies outside the ranges of television and radio.</p>	<p>Page 325 lines 1-4.</p> <p>Page 324 line 34-35.</p> <p>Page 324 lines 23-31.</p> <p>Page 14 lines 15-17.</p> <p>Page 463 lines 10-29.</p>	<p>programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.</p> <p>... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p> <p>... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p> <p>In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....</p> <p>(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>and a controller or computer capable of controlling</p> <p>one or more of said selective transfer devices, said remote intermediate transmitter station adapted</p> <p>to detect one or more control signals,</p>	<p>Column 11 lines 3-5.</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...</p>	<p>Page 325 line 34 to page 326 line 7.</p> <p>Page 59 lines 29-33</p>	<p>absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	<p>information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
(1) receiving said data to be transmitted by the remote intermediate transmitter station and		Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire... ... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
	delivering said data to a data transmitter, said data comprising an instruct signal which is effective at the receiver station to	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.

coordinate presentation	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV</p>
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Claim Language	Support to parent application filed November 3, 1981.	Language	Reference	Support to instant specification.	Language
of said data with a	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 451 line 3.  Page 23 line 35 to page 24 line 16.	<p>monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p>	
		generate several graphic video overlays, ...	Page 451 lines 7-11.		
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.		
		upon command.	Page 44 lines 14-17.		

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
separate predetermined presentation sequence;		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 26 lines 20-28.  Page 25 lines 26-33.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	(2) receiving said one or more control signals which at the remote intermediate transmitter station operate to control the communication of said data; and	Column 19 lines 56-59.  Column 19 lines 60-62.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.  At this point, an instruction signal is generated in the television studio originating the programming ...	Page 451 lines 25-32.  Page 59 lines 29-33.  Page 25 lines 34-35.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, ...



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
(3) transmitting said one or more control signals from said data transmitter		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
before a specific time.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	11. Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....</p>
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
17. The method of claim 16, wherein said specific time is a scheduled time of transmitting said data at said remote intermediate transmitter station or		Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations or embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
said one or more control signals are effective at the remote intermediate transmitter station to control one or more of said plurality of selective transmission devices at different times.		Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
18. The method of claim 16, further comprising the step of embedding a specific one of said one or more control signals in said data before transmitting said data to said remote intermediate transmitter station.	Column 20 lines 12-15.	FIG 6D illustrates one method for coordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.		<p>Page 469 lines 3-6.</p> <p>Page 478 lines 1-5.</p> <p>Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)</p>	
	Column 11 lines 32-39.	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language

		... monitor information that identifies what programming is available, ...
		Meter-monitor segments contain meter information and/or monitor information.

19. A method of controlling a receiver station including the steps of:	Column 10 line 64 to column 11 line 3.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 325 lines 17-27.	In line between each of the aforementioned receiver/ demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
			Page 324 line 31 to page 325 line 2.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, ...
detecting the presence or	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
absence of	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 391, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.	
a broadcast or cablecast	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.	
control signal;	Column 8 lines 58-60.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 290 lines 26-31.	... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...	
			Page 291 lines 21-24.	In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...	
			Page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
inputting an instruction-react signal to a processor  based on said step of detecting; controlling said processor to output specific information in response to said step of inputting; and	Column 8 lines 27-29.  Column 8 lines 62-65.	The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.  The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 248 line 35 to page 249 line 5.  Page 251 lines 3-8.  Page 253 lines 10-11.  Page 253 lines 19-22.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.  Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.  Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...  Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.
coordinating presentation of	Column 8 line 68 to column 9 line 4.  Column 19 lines 60 to page 20 line 2.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.  At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 258 lines 10-19.  Page 25 line 34 to page 26 line 2.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by

Claim Language	Support to parent application filed November 3, 1981	Language	Reference	Support to instant specification	Language
data with a	Column 19 lines 48-53.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words</p>	

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification	
Reference	Language	Reference	Language
		which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	generate several graphic video overlays, ...	Page 451 lines 7-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
	upon command.	Page 44 lines 14-17.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 26 lines 20-28.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated
separate predetermined presentation sequence based on information received from said processor based on said step of controlling.	Column 19 line 53-56.	Page 25 lines 26-33.	

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference

			graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 4 lines 26-28.	Signals may also be transmitted on frequencies outside the ranges of television and radio.	<p>In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....</p> <p>(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)</p>
			<p>Page 14 lines 15-17.</p> <p>Page 463 lines 10-29.</p>

20. The method of claim 19, wherein a buffer is operatively connected to said	Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a
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Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
Reference		Language	Reference
Language		Language	Language
processor for buffering input, said method further comprising the step of:	Column 8 lines 20-25.	such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.  The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	requirement for such transfer to controller, 20, which causes such transfer.  Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.  Fig. 3A shows one such preferred controller, 39.  One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series. Buffer, 39A, and processor, 39B, are the first buffer and processor of the series and perform the forward error correcting functions of controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. Buffer, 39E, and control processor, 39J, are the third buffer and processor. All controlled functions invoked at controller, 39, by received SPAM signals are invoked at control processor, 39I.  As Fig. 3A shows, each processor, 39B, 39D, and 39J, has associated RAM and ROM and, hence, constitutes a programmable controller in its own right.
			Page 33 lines 7-12.  Page 156 line 33 to page 157 line 10.  Page 157 line 34 to page 158 line 1.
			Page 251 lines 3-8.
inputting said instruct-to-react signal directly to said processor.	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder,

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language		Language

		203, in example #3.
		Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...
		Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.
Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
		... information and transmit it to digital detector, 34; causing digital detector, 34, to detect the binary information of said signal information and transfer said binary information to controller, 39. Receiving said binary information at controller, 39, causes the binary SPAM information of the wireless channel 5 transmission to be checked and corrected, as necessary, at processor, 39B; converted into locally usable binary information at processor, 39D; and checked for end of file signal information at EOFs valve, 39F, and transmitted to the null output of matrix switch, 39I, until EOFs valve, 39F, detects an end of file signal. In due course, said EOFs valve, 39F, receives the
		Page 253 lines 10-11.
		Page 253 lines 19-22.
		Page 258 lines 10-19.
		Page 254 line 23 to page 255 line 3.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			<p>Page 259 lines 3-29.</p> <p>aforementioned end of file signal causing said valve, 39F, to detect said signal and transmit the aforementioned interrupt signal of EOFs-signal-detected information to said control processor, 39J. Receiving said EOFs-signal-detected ...</p> <p>In due course said remote wireless station transmits the end of file signal that terminates said information segment, and the EOFs valve, 39F, of decoder, 30, receives and detects said signal, in its end of file detecting fashion, causing said valve, 39F, to transmit the aforementioned EOFs-signal-detected information to said control processor, 39J. Just as applied in the case of the 2nd command (#5), receiving said EOFs-signal-detected information causes control processor, 39J, to cause EOFs valve, 39F, to discard all information of said end of file signal; to cause said matrix switch, 39I, to cease transferring SPAM message information from said EOFs valve, 39F, to its null output information and commence transferring SPAM message information from said valve, 39F, to said control processor, 39J; then to cause EOFs valve, 39F, to recommence processing inputted signal words in its preprogrammed fashion and transferring said words to matrix switch, 39I; and to commence waiting to receive from said switch, 39I, the binary information of a subsequent SPAM header.</p> <p>Subsequently, said remote wireless station transmits the second combining synch command of the "Wall Street Week" program. (Hereinafter, said command may be called the "3<sup>rd</sup> command (#5).")</p>
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21. The method of claim 19, wherein said	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the
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Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Reference	Language
processor processes a datum designating a television channel or a television program, said method further having one step of the group consisting of:	externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.			apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.	Page 267 lines 20-28 from example #5.  Page 436 line 9 to page 437 line 3.	

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language	Language	Language

			... to receive the transmission of cable channel 13; ...
controlling a tuner to tune a receiver to receive the television channel or television program designated by said processed datum;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p>
	Page 439 lines 14-15.		
	Page 445 line 24 to page 446 line 1.		
	Page 446 lines 17-21.		
	Page 437 lines 1-6.		
	Page 439 lines 9-15.		
	Page 295 lines 6-8.		

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
controlling a selective transmission device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
a control signal detector at least some portion of the television channel or television program designated by said processed datum;	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...		Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a computer to respond to control signals detected in the television channel or television program designated by said processed datum;	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.		Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.		Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is
				Page 26 lines 20-28.	

Claim Language	Support to parent application filed November 3, 1981.	Language	Reference	Support to instant specification.	Language
	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then</p>	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
Reference		Language		Reference	
Language		Language		Language	
		The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...	
controlling a television monitor to display video or audio contained in the television channel or television program designated by said processed datum;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
controlling a storage device to process video or audio contained in the television channel or television program designated by said processed datum; and	Column 19 lines 23-27.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...		Page 437 lines 1-6.  Page 439 lines 9-15.  Page 295 lines 6-8.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language		Language

			<p>cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p>
			<p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>
controlling a selective transmission device to communicate to a storage device or a television monitor the television program designated by said processed datum.	Column 19 lines 23-29.	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p>
			<p>Page 437 lines 1-6.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p>



Support to parent application filed November 3, 1981		Support to instant specification.	
Claim Language	Reference	Language	Reference
		... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.	Page 446 lines 18-23.
		... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...	Page 445 line 24 to page 446 line 1.
		... and to tune monitor, 202M, in a predetermined fashion.	Page 445 line 35 to page 446 line 1.
		In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 446 lines 17-21.
22. The method of claim 19, wherein said processor processes a datum designating one or more specific channels of a multichannel cable or broadcast signal, said method further having one step of the group consisting of:	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	Page 436 line 9 to page 437 line 3.
		Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ...	

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification.
Reference	Reference	Language
		<p>the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
controlling a tuner to tune a converter to receive the one or more specific channels designated by said processed datum;	Column 19 lines 27-29.	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and</p>
	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 439 lines 14-15.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...		Page 437 lines 1-6.	audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...  ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
controlling a selective transmission device to input to					

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
Reference		Language		Reference	
a control signal detector at least some portion of the one or more specific channels designated by said processed datum;	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 :..		Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...		Page 451 lines 6-7.	
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
controlling a control signal detector to search	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
				Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 17 lines 28-33.	... control information connections between signal processor, 130, and the		Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
for one or more control signals in the one or more specific channels designated by said processed datum;			remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)		commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
controlling a selective transmission to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
input to a computer control signals detected in the one or more specific channels designated by said processed datum;	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,  several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.		Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  ... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a computer to respond to control signals detected in the one or more specific channels designated by said processed datum;				38 line 8.	the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
			These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	
controlling a computer to respond to control signals detected in the one or more specific channels designated by said processed datum;	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.		Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.		Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
					Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
					Page 26 lines 4-11.
					This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.
					The viewer then sees a microcomputer generated graphic of his own stocks' performance ...
					...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."
					Column 19 lines 27-29.
controlling a television monitor to display video or audio contained in the one or more specific channels designated by said processed datum;					... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
					In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
controlling a video					Determining a match causes microcomputer,
					Page 437 lines 1-6.



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
recorder to record or play video or audio contained in the one or more specific channels designated by said processed datum; and			214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"...	Page 439 lines 9-15.  Page 295 lines 6-8.  Page 439 lines 9-15.  Page 445 lines 24-27.  Page 446 lines 18-23.	205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
					... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... ... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....
					... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
					Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular
controlling a selective transmission device to communicate to a storage device or an output device the one or more specific channels designated by said processed datum.		Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 437 lines 1-6.	

			apparatus ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... ... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ... ... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ... ... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		Page 295 lines 6-8.	
		Page 439 lines 9-15.	
		Page 445 lines 24-27.	
		Page 446 lines 18-23.	
		Page 445 line 24 to page 446 line 1.	
		Page 445 line 35 to page 446 line 1.	
		Page 446 lines 17-21.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
23. A method of controlling	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 17 lines 47-53.	FIG 6 illustrates one possible		Page 451 line 3.  Page 390 lines 30-35.	And the Fig. 1C combining is displayed.  Fig. 7 exemplifies one embodiment of an

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiver station having			configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a processor for	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
passing and	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.	
executing instructions and	Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:	Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 10-18.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	
			Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiving a broadcast or cablecast transmission;		Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
demodulating said broadcast or cablecast transmission to detect an information transmission therein,		Column 6 lines 45-48.	The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.	Page 34 lines 31-35.	The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.
said information transmission comprising an instruct signal which is effective		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7.	The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
to coordinate presentation	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...		
			Page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.  Page 26 lines 4-11.		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
				Page 451 line 3.	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference		Reference	
		Language		Language	
with a separate predetermined sequence;	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did in the past week," and a studio generated graphic is pictured.		Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
detecting said instruct signal in said information transmission and passing said instruct signal to said processor;	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.		Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 7 lines 6-11.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.		Page 29 line 33 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor,		Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
	12.				
delaying, under processor control, passing said instruct signal to a controllable apparatus;	Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to <b>delay</b> the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to <b>delay</b> in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.	
passing said instruct signal to said controllable apparatus	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
based on a timing signal; and	Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and <b>when</b> and <b>where</b> and how to determine which signals to pass to buffer/comparator, 14.	Page 33 lines 18-20.  Page 149 lines 8-15.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...  Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, to <i>execute particular preprogrammed transfer- and-meter instructions</i> ...  Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said	



Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Reference	Support to instant specification. Language
	<p>Column 8 lines 56-58.</p> <p>See Fig. 1.</p>	<p>To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus.</p>	<p>For example, page 152 line 19 to page 153 line 1.</p> <p>Page 33 lines 18-21. See Fig. 2.</p>	<p>decrypted information of the second message <i>under control of said transfer-and-meter instructions</i> commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence <i>executing the meter instructions of said transfer-and-meter instructions</i>. Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p> <p>Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.</p>
<p>controlling said controllable apparatus based on said instruct signal.</p>	<p>Column 19 line 64 to column 20 line 2.</p>	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p>	<p>... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
25. A method of communicating data and update material to one or more	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.	
mass medium programming receiver stations each of which includes a	Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...	
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
broadcast or cablecast	Column 18 lines 62-65.	In a predetermined fashion, either	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
			Page 423 lines 11-13.	Receiving said message causes said controller,	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
data receiver,		microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 424 lines 2-9.	20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...  Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.
a data storage device,	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
a control signal detector,	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
a computer capable of	Column 18 lines 65-67.	... and microcomputer, 200, may record	Page 426 lines 10-18.	Then automatically, microcomputer, 205,

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
processing data, said receiver stations adapted			the information in memory or transfer it to printer, 221, for printing ...		transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A&T news item.)
to detect and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
respond to one or more instruct signals and to store data for subsequent processing, said method comprising the steps of:	Column 19 lines 42-44.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.		Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
(1) receiving said data to be transmitted and	Column 10 lines 30-39.	The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV		Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
delivering the data to a transmitter;		Column 19 lines 43-44.	demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions. ... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	programming transmissions are received by other programming input means, 62. ... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
(2) receiving said one or more instruct signals which		Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
at the receiver station are effective to coordinate presentation		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
of said data with a	Column 19 lines 48-53.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification.
Reference	Language	Reference Language
	generate several graphic video overlays, ...	which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
	and to transmit these overlays to TV set, 202,	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	upon command.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
separate predetermined presentation sequence;	Column 19 line 53-56.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
					graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
(3) transferring said one or more instruct signals to a transmitter; and	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.	
	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	
(4) transmitting an information transmission comprising said data and said one or more instruct signals.	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...	
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is	



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Language
Reference	Language	Reference

	decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p>
		<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>
Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to	<p>Page 26 lines 1-2.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			microcomputer, 205.	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
26. The method of claim 25, wherein some identification data	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.  Page 436 line 9 to page 437 line 3.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is	

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification.	Language
<p>or said one or more instruct signals are embedded in a television signal containing said data.</p>	<p>Column 20 lines 27-29.</p> <p>Column 19 lines 60-63.</p>	<p>... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 439 lines 14-15.</p> <p>Page 471 line 35 to page 472 line 1.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the</p>	<p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00"</p>	<p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00"</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	header, an execution segment, and a meter-monitor ...
27. The method of claim 25, wherein said step of transmitting directs said broadcast or cablecast transmission to a plurality of receiver stations at the same time and	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...		Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
each of said plurality of receiver stations receives or responds to said one or more instruct signals concurrently.	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
	Column 20 lines 12-15.	FIG 6D illustrates one method for co-ordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.		Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
				Page 469 lines 3-6.	Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.
				Page 478 lines 1-5.	(Whichever transmission method is employed

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

	Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 12 lines 30-35.	the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)  It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
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28. The method of claim 25, wherein said step of transmitting directs said broadcast or cablecast transmission to a plurality of receiver stations at different times and	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 89 lines 3-6, and page 90 lines 4-11.  Page 324 lines 8-17.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.		operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
				Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
each of said plurality of receiver stations responds to said one or more instruct signals at a different time.		Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>Page 337 lines 1-19.</p>	<p>should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	<p>transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p>	<p>(An alternate method for inputting said</p>
	<p>Column 20 lines 31-36.</p>	<p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 471 line 26 to page 472 line 17.</p>	
			<p>Page 476 line 34 to</p>	



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 20 lines 42-46.</p> <p>Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.</p>		<p>page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 472 lines 23-27.</p> <p>Page 473 line 29 to page 474 line 1.</p>	<p>second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said <b>generate-recipe-</b> ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				described above.
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29. The method of claim 25, further comprising the steps of receiving said data at a receiver in the transmitter station,	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
communicating said data from said receiver to a memory location, and	Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
storing said unit at said memory location	Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
for a period of time prior to communicating said unit to a transmitter.	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ...

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
					transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
30. A method of delivering a mass medium programming presentation comprising mass medium programming content and receiver station programming information content	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		Page 451 line 3.  Page 390 lines 30-35.	And the Fig. 1C combining is displayed.  Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a receiver for receiving a mass medium programming signal,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to		Page 396 lines 8-10.  Page 445 line 24 to page 446 line 1.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
a computer for communicating information, and		"Wall Street Week."		Page 446 lines 17-21.	of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 4-10.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
one or	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		Page 25 line 34 to page 26 line 2.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
				Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
					In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
<p>more output devices operatively connected to said receiver and said computer for delivering to a viewer said mass medium programming presentation, with</p> <p>said computer comprising one or</p>	<p>Column 18 lines 65-67.</p>	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...</p> <p>Column 18 lines 65-67.</p>	<p>forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A T &amp; T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A T &amp; T news item.)</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A T &amp; T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
more data storage locations, said method comprising the steps of:		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	storing a timing signal specifying a time or a series of times;	Column 18 lines 46-48.  Column 19 lines 35-41.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.  Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 420 lines 3-6.  Page 449 lines 13-35.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
controlling said computer a first time based on said timing signal, said first step of controlling comprising:	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
				Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
(1) making a comparison between	Column 18 lines 56-58.	... signal processor, 200, to hold examples of the sought for unique signals in its buffer/comparator, 8, and compare them with all incoming signals.	Page 420 lines 6-20.	stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.  The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".
stored identification data designating a viewer interest and	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 422 lines 33 to Page 423 line 4.  Page 420 lines 3-6.	...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....  The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
received data including timing data;	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Reference	
		Language		Language	
					apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said <b>closing</b> stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
(2) selecting a portion of said received data based on said comparison; and	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that <b>relate</b> to the stocks in its stored portfolio.		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
(3) storing said selected portion at a one of said one or more storage locations;	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
controlling said computer a second time	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...		Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>based on said timing signal, said second step of controlling comprising:</p>	<p>Column 19 lines 5-9.</p>	<p>... microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast. Microcomputer, 205, is preinformed of the time of cablecasting.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 428 lines 21-26.</p> <p>Page 437 lines 1-3.</p>	<p>the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p>
<p>(1) selecting a portion of computer programming instructions;</p>	<p>Column 19 lines 46-48.</p>	<p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 23 line 35 to page 24 line 4.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>

Claim Language		Support to parent application filed November 23, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 37 line 26 to page 38 line 8	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
(2) generating or retrieving receiver station programming information content based on	Column 19 line 67 to column 20 line 1.  Column 19 lines 64-66.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...		Page 26 lines 8-11.  Page 26 lines 1-8.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
said selected portion of data and	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
in accordance with said portion of instructions; and	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to		Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
Language		Language		Language	
(3) preparing to communicate said receiver station programming	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to	generate several graphic video overlays, ...  and to transmit these overlays to TV set, 202,  upon command.	Page 451 lines 7-11.  Page 26 lines 4-8.  Page 44 lines 14-17.  Page 26 lines 20-28.	microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital			

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
information content;	<p>microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p> <p>Column 20 lines 5-7.</p>	<p>microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p> <p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the</p>	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 27 lines 7-9 and</p>	<p>signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received</p>

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification.	Reference	Language
controlling said computer a third time	Column 19 lines 20-29.	originating studio.		<p>instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>	<p>Page 451 line 22 to Page 452 line 5.</p>	<p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>
	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 436 line 9 to page 437 line 6.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW</p>		

Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Support to instant specification. Reference	Language
		<p>Then, in a predetermined fashion, microcomputer, 205, may</p> <p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p> <p>and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p>	<p>information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
based on said timing signal, said third step of controlling comprising:		Column 19 lines 5-9.	and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...  ...and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			... microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast. Microcomputer, 205, is preinformed of the time of cablecasting.	Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
			Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 437 lines 1-3.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
(1) selecting a portion of at least one of said mass medium programming content and said receiver station programming information content;	Column 19 lines 20-23.			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
				Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Language
		<p>Page 436 line 9 to page 437 line 3.</p>	<p>apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 439 lines 9-15.	apparatus ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
<u>OR</u> controlling said computer a third time	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
based on said timing signal, said third step of controlling comprising:		Column 19 lines 5-9.	... microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast. Microcomputer, 205, is preinformed of the time of cablecasting.	Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
(1) selecting a portion of at least one of said mass medium programming content and said receiver station programming information content;		Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 437 lines 1-3.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
(2) selecting one or more output devices;		Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
				Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(3) communicating said selected content to said selected one or more output devices;					cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
thereby presenting to a subscriber		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
at a controlled time mass medium programming with mass medium programming content		Column 19 lines 27-29.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
and receiver station programming information content, said mass medium programming content and said receiver station programming information content being outputted to said subscriber either as	Column 19 line 64 to column 20 line 2.	Page 446 lines 17-21.  Page 26 lines 4-11.	a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  ... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
a combined or	Column 19 lines 67 to column 20 line 2.	Page 451 line 3. Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
sequential presentation at an output device or	Column 19 lines 59-60. Column 19 lines 67 to column 20 line 2.	Page 25 lines 33-34. Page 451 line 3. Page 26 lines 8-11.	Then the host says, "And here is what your portfolio did." And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

as parallel presentations at a plurality of output devices.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)

31. An apparatus for coordinating a programming presentation at a mass medium programming receiver station	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.
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Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Reference	Language
comprising:				<p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>	<p>page 450 line 27 to page 451 line 11.</p>	<p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
a first output device for outputting to a subscriber mass medium programming;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said</p>	<p>Page 446 lines 17-21.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	information, and to emit sound in accordance with said audio ...  Then the host says, "And here is what your portfolio did."
a storage device for storing a timing control signal, said timing control signal comprising a datum designating a time	Column 18 lines 46-48.  Column 19 lines 35-37.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.  Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 420 lines 3-6.  Page 449 lines 13-26.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
(a) to obtain from a first remote station some information to be processed for subsequent output in coordination with said mass medium programming or	Column 19 lines 37-39.	[Microcomputer, 205.] may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Language
(b) to select some information associated with	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.	
a coordinated programming presentation when received from a remote station;	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a processor operatively connected to said storage device for receiving from one of said first remote station and a second remote station	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
one or more instructions or	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
identification data that designate	Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.	Page 15 lines 16-23.  Page 34 lines 24-26.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...  ... identifies the particular apparatus to which

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
one or	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is <b>addressed</b> to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is <b>addressed</b> to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at</p>
			Page 44 lines 14-15.
			Page 95 lines 18-21.
			Page 26 lines 1-2.
			Page 37 line 26 to page 38 line 8.
			Page 26 lines 4-11.



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Language	Reference	Language
		<p>Page 37 line 26 to page 38 line 8.</p>	<p>detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining</p>
	<p>These signals instruct microcomputer, 205,</p>	<p>Page 24 lines 5-16.</p>	
	<p>to generate several graphic video overlays,</p>	<p>Page 451 lines 7-11.</p>	
	<p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p>	<p>Page 19 line 29 to page 20 line 20.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
	transmit these overlays to TV set, 202,		Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	upon command.		Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
a controller or	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
computer operatively connected to said receiver section for controlling or communicating information to an output device; and	Column 19 lines 63 to column 20 line 2.	<p>of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p> <p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a second output device operatively connected to said controller or computer for presenting said one or	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 4-11.	subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.  ... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
more outputs coordinated with said mass medium programming.	Column 20 lines 2-7.	When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 451 line 3.  Page 26 line 33 to page 27 line 9.	And the Fig. 1C combining is displayed.  As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.  Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				<p>unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>
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32. A method of delivering an individualized mass medium programming presentation comprising	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	<p>... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Then the host says, "And here is what your portfolio did."</p>
mass medium programming content and	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	<p>Page 451 line 3.</p> <p>Page 25 lines 33-34.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiver station programming information content	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
a receiver for receiving a mass medium programming signal,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a computer for processing and communicating information, and		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 446 lines 17-21.  Page 26 lines 4-10.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
	one or	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
more output devices operatively connected to said receiver and said computer for delivering to a subscriber said presentation, with	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 26 lines 4-11.  Page 451 line 3.  Page 426 lines 10-18.	...  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	
said computer comprising one or	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	
more data storage locations, said method comprising the steps of:	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
receiving a plurality of timing signals or		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
a timing signal specifying a series of times;		Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
		Column 19 lines 37-39.	[Microcomputer, 205,] may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
detecting the presence of an instruct-to-coordinate signal received from a remote station or	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification.	Reference	Language
				microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)		
				Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...	Page 436 line 9 to page 437 line 3.	
				Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.		
				Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.	Page 439 lines 14-15.	
				... to receive the transmission of cable channel 13; ...	Page 320 lines 24-31.	
from a mass medium programming source,	Column 16 lines 43-47.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder,		Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So		



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said instruct-to-coordinate signal designating		Column 19 lines 42-44.	31, identifies the embedded signals and transfers them to signal processor, 131.		playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...
	a specific one of said plurality of timing signals or	Column 19 lines 5-9.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.  ... microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast. Microcomputer, 205, is preinformed of the time of cablecasting.	Page 21 lines 20-24.  Page 428 lines 21-26.	Microcomputer, 205, is preprogramed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
a specific one of said series of times;		Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 437 lines 1-3.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
selecting at a first controlled time one or more data to serve as		Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
a basis for a portion of said individualized mass medium programming presentation; and subsequently	<p>Column 3 lines 6-8.</p> <p>Column 19 lines 48-53.</p>	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>These signals instruct microcomputer, 205, to</p>	<p>Page 14 line 35 to page 15 line 2.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205,</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
outputting to said subscriber at a second controlled time in the course of a mass medium programming presentation processed			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
information of said selected one or more data, at least one of		microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 37 line 26 to page 38 line 8.
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...	
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	Page 26 lines 4-11.
		And the Fig. 1C combining is displayed.	Page 451 line 3.
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.
said first controlled time and	Column 19 lines 45-49.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.	Page 23 line 35 to page 24 line 4.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said second controlled time being in response to	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
			Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
			Page 25 line 33 to page 26 line 2..	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said instruct-to-coordinate signal and		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programing transmission.	Page 26 lines 4-8.	to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	said processed information of said selected one or more data being outputted either as combined or	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 21 lines 23-24.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
sequential output with said mass medium programming or		Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 451 line 3.	... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	And the Fig. 1C combining is displayed.
at a first of said one or		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 25 lines 33-34.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	more output devices concurrently with	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 26 lines 8-11.	Then the host says, "And here is what your portfolio did."
				Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
				Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
				Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A T&T news item. (Said preprogrammed instructions entered by the subscriber might

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said mass medium programming outputted at  a second of said one or  more output devices.		Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)  Then the host says, "And here is what your portfolio did."
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
33. An apparatus for providing a coordinated programming presentation at a mass medium program receiver station comprising:		Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
				Page 451 line 3.	And the Fig. 1C combining is displayed.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a first receiver for receiving a mass medium program at said mass medium program receiver station;	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
a first output device for outputting said mass medium programming;	Column 19 lines 27-29.   Column 19 line 53-56.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."   Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 445 line 24 to page 446 line 1.          Page 446 lines 17-21.       Page 25 lines 26-33.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
a first processor for receiving from a remote station or	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
from a mass medium program source	Column 19 lines 25-27.	Street Week" programing transmission. ... and [microcomputer, 205,] may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27.	Street Week" programming transmission. ... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...
	Column 16 lines 43-47.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 446 lines 18-23.  Page 320 lines 24-31.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.  Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...
	Column 16 lines 47-50.	Prerecorded video cassettes and videodiscs could also contain unique embedded codes that would identify their usage (and could also transfer instructions to other external equipment).	Page 321 lines 1-5.	Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming....
			Page 476 lines 18-22.	...this method enables any subscriber who records the transmission of said programming at a recorder/player, 217, to access the embedded information of said instructions automatically in this fashion whenever the recorded transmission of said programming is played back....
			Page 473 lines 14-17.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred....

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Reference	
		Language		Language	
an instruct-to-coordinate signal that designates	Column 19 lines 43-53.	... instruction signals embedded in the "Wall Street Week" programming transmission.		... instruction signals embedded in the "Wall Street Week" programming transmission.	
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.	
		These signals instruct microcomputer, 205,		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
				Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."	
		Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.		Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	
		Page 37 line 26 to page 38 line 8.		Page 37 line 26 to page 38 line 8.	
		Page 24 lines 5-16.		Page 24 lines 5-16.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
		<p>to generate several graphic video overlays,</p> <p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p> <p>transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>one or more data to select and input to a second processor;</p>	<p>Column 19 lines 31-34.</p>	<p>performance ...</p> <p>FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>	<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a second receiver operatively connected to said first processor for receiving said one or more data, said one or more data being	Column 19 lines 35-37.  See "one digital data channel" in Fig. 6C.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.  See "one digital data channel" in Fig. 7C.	microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
associated with said coordinated programming presentation, and	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
communicating said data to said second processor following a specific time;	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
said second processor operatively connected to said second receiver for processing said designated data to	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
output coordinated presentation content; and	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.





Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at least one receiver for receiving mass medium program signals,	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 451 line 3.  Page 390 lines 30-35.	And the Fig. 1C combining is displayed.  Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 396 lines 8-10.          Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
a computer for processing and communicating information, and	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
to a subscriber said presentation, with said computer comprising one or more data storage locations, said method comprising the steps of:		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 451 line 3. Page 426 lines 10-18.	And the Fig. 1C combining is displayed. Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
receiving data to be processed or communicated in response to an instruct-to-coordinate signal;		Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
detecting the presence of said instruct-to-coordinate signal received	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	industries of said stocks.	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.  Page 451 lines 7-9.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
	Column 6 lines 48-50.  Column 19 lines 31-34.	This base band signal is then transmitted through separate paths to three separate detector devices.  FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.		Page 34 line 35 to page 35 line 1.  Page 18 lines 24-27.  page 450 line 27 to	This base band signal is then transferred through separate paths to three separate detector devices.  Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
from a remote station or				page 451 line 11.	that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7. Applicants teach this as the composition of the	The second message is of the information associated with the second combining synch command. Said second command has a "00"

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
from a mass medium program source, said instruct-to-coordinate signal	Column 16 lines 43-47.		Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 320 lines 24-31.	header, an execution segment, and a meter-monitor ...  Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...
designating	Column 19 lines 43-44.		... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
one or	Column 19 lines 27-29.		... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
more mass medium programs	Column 19 lines 48-53.		These signals instruct microcomputer, 205, to	Page 446 lines 17-21.  Page 23 line 35 to page 24 line 16.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Subsequently, a second series of instructions is embedded and transmitted at said program

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
				<p>originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p>
	generate several graphic video overlays, ...		Page 451 lines 7-11.	
	and to transmit these overlays to TV set, 202,		Page 26 lines 4-8.	
	upon command.		Page 44 lines 14-17.	
			Page 26 lines 20-28.	
to be coordinated;	Column 19 line 53-56.	Subsequently in the program, the host says,	Page 25 lines 26-33.	<p>During this time the program may show the</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
		"Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.		so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.	
selecting in response to said instruct-to-coordinate signal one or more of said received data to serve as	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	
a basis for a portion of said individualized mass medium program presentation; and subsequently	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
outputting to said subscriber processed information of	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
said selected one or	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...	
more data	Column 19 lines 39-41.	[Microcomputer, 205,] records those	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
in the course of the presentation of said one or		prices that relate to the stocks in its stored portfolio.		stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
	Column 19 line 67 to column 20 line 7.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 26 lines 8-11.  Page 451 line 3.  Page 26 line 33 to page 27 line 9.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.  As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.
			Page 451 line 22 to page 452 line 5.	Furthermore, it is undesirable to separate computer operations merely because they

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
more mass medium programs, said processed information of said selected one or more data being outputted at one of said one or more output devices either as	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to		<p>result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not</p>	
		generate several graphic video overlays, ...		<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p>	

Claim Language	Support to parent application-filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	and to transmit these overlays to TV set, 202,  <b>upon command.</b>	one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...	Page 26 lines 4-8.  Page 44 lines 14-17.  Page 26 lines 20-28.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.	Page 27 lines 7-9 and	Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.
		Furthermore, it is undesirable to separate	Page 451 line 22 to	Furthermore, it is undesirable to separate

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			Page 452 line 5.	<p>computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>Then the host says, "And here is what your portfolio did."</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>
a combined or	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	
sequential output with said one or more mass medium programs or at	Column 19 lines 59-60.  Column 19 line 67 to column 20 line 1.	Then the host says, "And here is what your portfolio did."  The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 25 lines 33-34.  Page 26 lines 8-11.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a first of said one or more output devices		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
concurrently or		Column 4 lines 28-30.	Different and differing numbers of signals may be sent in different and differing word lengths and locations.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
sequentially with said one or more mass medium programs outputted at a		Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	In the preferred embodiment...SPAM messages are composed of varying numbers and sequences of segments of highest priority, intermediate priority, and lowest priority segment information. Complex SPAM receiver apparatus have means and are preprogrammed to process at register memory execution segment information of varying lengths of binary information.
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
second of said one or more output devices.		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
					instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
35. A method of providing data of interest to a receiver station from a remote data source,	Column 15 lines 20-25.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.		Page 311 line 33 to page 312 line 8.	And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information. And for example, the transmitted programming ...
				Page 293 lines 32-35.	At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....
				Page 301 lines 6-9.	... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...
				Page 308 line 35 to page 309 line 3.	At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...
said data of interest for use at the receiver station in generating or outputting a receiver specific datum, said method comprising the steps of:	Column 14 lines 46-54.	The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,		Page 299 lines 13-25.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, ...
	in this case, is not located in the channel transmission.		Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...
	They may be preprogrammed into the signal processor (for example,		Page 299 lines 13-17.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, ...
	in programmable random access memory controller, 20, in Fig. 1)		Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...
	or they may be transmitted in a channel other than the channel being transferred from box, 114.		Page 293 line 20.	...such as, for example, the RAM of controller, 20; ...
			Page 291 lines 10-20.	...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") ...
			Page 289 lines 25-27.	... said "Wall Street Week" program when transmission of said program on cable

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			<p>13 commences. ...</p> <p>...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system ...</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...</p>	
storing data at said remote data source;	<p>Column 15 lines 22-25.</p> <p>Column 9 lines 21-23.</p>	<p>... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.</p> <p>[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...</p>	<p>Page 290 lines 28-29.</p> <p>Page 294 lines 28-35.</p> <p>Page 312 lines 6-8.</p> <p>Page 273 lines 6-19.</p>	<p>... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p>



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
receiving at said remote data source a query from said receiver	... can be reprogrammed from such remote sources.	<p>Page 537 lines 6-17.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>with respect to page 555 line 24 to page 556 line 14.</p> <p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p> <p>Page 312 lines 6-8.</p> <p>... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
station;			necessary for the proper decryption and/or transfer of incoming programming transmissions.		
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing some of said transmitted data;	Column 15 lines 22-25.	... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 312 lines 6-8.	... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.	
	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.	
		... can be reprogrammed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			with respect to page 555 line 24 to page 556 line 14.	computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.  ...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station. Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...
transmitting from a second remote source to said receiver station a signal which controls said receiver station to	Column 15 lines 20-22.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion ...	Page 311 lines 26-28.  Page 311 line 33 to page 312 line 2.  Page 293 lines 32-35.	And for example, the transmitted programming may be processed through fewer than three steps of decryption or more than three.  And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating ...  At each station where a match fails to

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Language	Language
	<p>Column 13 lines 17-20.</p> <p>The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programming uninterrupted may be embedded in the programming or may be elsewhere.</p>	<p>Page 301 lines 6-9.</p> <p>Page 308 line 35 to page 309 line 3.</p> <p>Page 291 lines 9-24</p> <p>Page 289 lines 22-27</p> <p>Page 290 lines 28-29</p>	<p>occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion ...</p> <p>... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...</p> <p>At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...</p> <p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... <i>on the frequency of said master control channel</i>. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p> <p>particular master cable control channel (that</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
select and process an instruct signal	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 298 lines 17-21.	<p><i>may or may not be cable channel 13</i>) from the multi-channel cable system</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...</p>
			Page 299 lines 19-22.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 25 line 33 to page 26 line 2.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 37 line 26 to page 38 line 8.	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
two predetermined sequences, at least one of which is based on said selected data.	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did in the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.	
<u>OR</u>					
two predetermined sequences, at least one of which is based on said selected data.	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.	
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")	
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			<p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 26 lines 4-8.</p>	<p>instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
				<p>Page 44 lines 14-17.</p>	
				<p>Page 26 lines 20-28.</p>	
36. A method of communicating subscriber station information from a subscriber station to one or more remote data collection stations, said method comprising the steps of:	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.		<p>Page 33 lines 18-20.</p> <p>Page 273 lines 4-6.</p> <p>Page 273 lines 21-25.</p>	<p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>





Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			<p>decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p>	
(3) determining the presence of said subscriber input at said subscriber station by processing said viewer's or participant's reaction;	Column 20 lines 31-33.	<p>and instruct control means, 226, to activate printer, 221.</p> <p>... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...</p>	<p>Page 477 lines 8-17.</p> <p>Page 474 lines 3-7.</p> <p>Page 472 lines 16-17.</p> <p>Page 472 lines 27-32.</p>	<p>controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145 and 203, ...</p>
(4) processing said information and	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
<p>coordinating</p>	<p>...</p> <p>Column 20 lines 37-42.</p> <p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200,</p> <p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p>	<p>Page 477 lines 8-23.</p> <p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p>	<p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular <b>covert control</b> information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "<b>covert control.</b>")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p><u>ONE OF:</u></p> <p>two predetermined sequences at said subscriber station in consequence of said step of determining; and</p>					<p>supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.		Page 478 lines 1-5.	
<p>two predetermined sequences at said subscriber station in consequence of said step of determining; and</p>	Column 20 lines 16-23.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."		Page 470 lines 1-3 and  Page 470 lines 9-13.	<p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; ...</p> <p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p>
				Page 470 lines 19-21.	
				Page 471 lines 6-13.	<p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".
<u>OR:</u> two predetermined sequences at said subscriber station in consequence of said step of determining; and	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.		Page 472 lines 23-27.  Page 473 line 29 to page 474 line 1.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.  Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
(5) transferring from said subscriber station to said one or more remote data collection stations an indication confirming execution of said step of processing.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,		Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
	that site can determine for billing purposes that the recipe was,			programming availability and usage.  ... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...  Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....  One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...  Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.  Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...  Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion	Page 44 lines 26-30.  Page 471 lines 26-31.  Page 473 lines 3-8.  Page 472 lines 23-27 with  Page 471 lines 14-16.  Page 473 line 29 to Page 474 line 1.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				described above.
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37. The method of claim 36, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing a subscriber instruction to	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
			Page 95 lines 18-24.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ... So transferring said message is the controlled

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
receive one or more specific mass medium programs,	Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.
data,	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.
news items, or	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.
		function that the information said header and execution segment cause controller, 39, to perform.  Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)  Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...  In due course, said remote news-service-A station transmits a particular A T&T news item in a particular Transmit-A T&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said A T&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
computer control instructions; and	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p>	<p><b>AT&amp;T news item, and an end of file signal.</b></p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p>
receiving said one or more specific mass medium programs, data, news items, or computer control instructions	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in accordance with said instruction.		Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
				Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
38. The method of claim 36, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing		Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
a subscriber instruction to		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
process or present one or more mass medium programs, data, news items, or computer control instructions in a specific fashion; and	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	the signal processor, 200, of said station.  Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".	
processing or	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
<p>presenting said one or more specific mass medium programs, data, news items, or computer control instructions in accordance with said instruction.</p>	<p>Column 20 lines 46-49.</p>	<p>first, ordered</p> <p>and, second, delivered.</p> <p>When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.</p>	<p>Page 473 lines 3-8.</p> <p>Page 472 lines 23-27 with</p> <p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p> <p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p>	<p>... One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
				Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
				Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
39. The method of claim 36, wherein said information that designates an instruct signal to process or an output to deliver is detected in an information transmission from a data or programming source, said method further comprising the steps of:	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...		Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
programming a processor to respond to information	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory		Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
communicated from said data or programming source;			controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.		unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
receiving an information transmission from said data or programming source;	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	<p>Figs. 2A-2C. Page 35 lines 1-6.</p> <p>Page 35 lines 16-18.</p> <p>Page 35 lines 27-30.</p> <p>Page 36 lines 1-3.</p> <p>Page 36 lines 18-20.</p> <p>Page 37 lines 26-28.</p>	<p><i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.</p> <p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p>	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
Reference		Language		Reference	
inputting at least some of said information transmission to a control signal detector;	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		Page 470 lines 1-3 and  Page 470 lines 9-12.  Page 470 lines 19-21.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		Page 470 lines 1-3 and  Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...		Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
detecting data or an instruct signal in said information transmission; and	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...		Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
passing said detected	Column 20 lines 29-30.	... which is also transferred by processor,		Page 472 lines 4-12.	... Automatically, the controller, 39, of

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
data or instruct signal to said processor.			204, to buffer/comparator, 8, of signal processor, 200.	Page 37 line 26 to page 38 line 8.	decoder, 145, ... transfers said message to said controller, 20.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
40. A method of controlling a remote intermediate data transmitter station to communicate data to one or more receiver stations, with said remote intermediate data transmitter station including	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 324 lines 18-21.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing			



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Reference	
		Language		Language	
<p>a broadcast or cablecast transmitter for transmitting one or more signals which are effective at a receiver station to instruct a computer or processor,</p> <p>a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter for communicating data,</p> <p>a data receiver for receiving at least one instruct signal,</p>	Column 12 lines 58-61.	<p>Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p> <p>The facility could also process and transmit radio programming and other electronic data according to the methods described here ...</p>	Page 339 lines 11-23.	<p>system "head end" and that cablecasts several channels of television programming.</p> <p>... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>	
	Column 10 lines 15-20.	<p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.</p>	Page 324 lines 8-17.	<p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.</p>	
	Column 10 lines 41-43.	<p>... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...</p>	Page 324 line 34-35.	<p>... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,</p>	
	Column 10 lines 30-39.	<p>The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56.</p>	Page 324 lines 23-31.	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a control signal detector,	Column 4 lines 26-28.	<p>Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p> <p>Signals may also be transmitted on frequencies outside the ranges of television and radio.</p>	<p>Page 14 lines 15-17.</p> <p>Page 463 lines 10-29.</p>	<p>received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p> <p>In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....</p> <p>(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)</p>
and a controller or computer capable of controlling one or more of said selective transfer devices, and with said	Column 11 lines 3-5.	Signal processor, 71, has means, described	Page 325 line 34 to	At signal processor system, 71, which is a

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
remote intermediate data transmitter station adapted to detect the presence of one or more control signals,			above, to identify and separate the instruction and information signals from their associated programming and ...	page 326 line 7.	system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.		Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.		Page 326 lines 19-20.  Page 328 lines 14-16.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ....
to control the communication of said at least one instruct signal	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...		Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
in response to said one or more control signals,	Column 6 lines 50-53.	These separate detectors are designed to act on the particular frequency ranges in which the encoded information may be found.	Page 59 lines 29-33	station;.... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 35 lines 1-4.	The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>and to deliver at its broadcast or cablecast transmitter said at least one instruct signal, said method comprising the steps of:</p>	<p>Column 11 lines 38-46.</p>	<p>By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>to modulator, 87.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations or embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said</p>
	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 lines 14-16.</p> <p>Page 328 line 22 to page 329 line 1.</p>	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
			field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
(1) receiving an instruct signal to be transmitted by the remote intermediate data transmitter station	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, ...
				Page 25 lines 34-35.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
and delivering said instruct signal to at least one origination	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
transmitter,		transmitted in the programming transmission.	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred;</p>
said instruct signal being effective at a receiver station to coordinate	Column 19 lines 60 to page 20 line 2.	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>		

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
<u>ONE OF:</u>			<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p>	<p>and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>
two predetermined sequences;	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p>
<u>OR:</u>	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	<p>For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
two predetermined sequences;	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")	
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	
		upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.	
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(2) receiving one or more control signals which at the remote intermediate data transmitter station operate to control the communication of said instruct signal; and	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.  Page 25 lines 34-35.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, ...  The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.	
	Column 11 lines 38-43.	By comparing <b>identification signals</b> on the <b>incoming programming</b> with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
(3) transmitting said one or more control signals from said at least one origination transmitter	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programing transmission.	Page 59 lines 29-33.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
before a specific time.	Column 11 lines 28-31.	Such input information might also indicate <b>when</b> and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 326 line 33 to page 327 line 2.	at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  Such input information can indicate <b>when</b> and how the station should expect to receive each program unit, <b>when</b> and on which channel or channels and how the station should transmit the unit,....
41. The method of claim 40, further comprising the step of embedding one of said signals in an information transmission containing said instruct signal before transmitting said instruct signal to said remote transmitter station.	Column 19 lines 43-44.  Column 11 lines 32-39.	... instruction signals embedded in the "Wall Street Week" programming transmission.  By means of the signals, with channel indicators, received from code reader, <b>72</b> , controller/computer, <b>73</b> , can determine what specific programming and programming unit has been received by each receiver, <b>53</b> through <b>62</b> , and is passing in line on each individual wire to matrix switch, <b>75</b> . By comparing identification signals on the incoming programming with the programming schedule ...	Page 21 lines 23-24.  Page 327 line 35 to page 328 line 13.	... instruction signals embedded in the "Wall Street Week" programming transmission.  Computer, <b>73</b> , monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, <b>71</b> . By means of the SPAM message information, with source mark information, received from code reader, <b>72</b> , computer, <b>73</b> , determines what specific program unit has been received by each receiver, <b>53</b> through <b>62</b> , and is passing in line, via each distribution amplifier, <b>63</b> through <b>70</b> , to matrix switch, <b>75</b> . By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, <b>74</b> , and/or network, <b>98</b> , computer, <b>73</b> , can determine, in a predetermined fashion, when and on what

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Language
		<p>channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	
<p>42. The method of claim 40, wherein one of (1) said specific time is a scheduled time of transmitting (a) said instruct signal or (b) some information associated with said instruct signal from said remote intermediate data transmitter station and</p>	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming</p>
	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
(2) said one or more control signals are effective at said remote intermediate data transmitter station to control one or more of said plurality of selective transfer devices at different times.	Column 4 lines 5-13.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored.	Page 28 lines 26-27.  Page 49 lines 26-27.  Page 13 lines 25-32.	transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.
	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
43. A method of controlling a receiver station including the steps of:	Column 10 line 64 to column 11 line 3.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70,	Page 325 lines 17-27.	In line between each of the aforementioned receiver/ demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		individually to signal processor, 71.		receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
detecting one of the presence and	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 324 line 31 to page 325 line 2.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, ...
absence of	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
a broadcast or cablecast	Column 6 lines 23-26.	A signal processor apparatus for	Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39I, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
			Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
control signal;	Column 8 lines 58-60.	simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.  Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 290 lines 26-31.  ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...  In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.	processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.  ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...  In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.	
inputting an instruct-to-react signal to a processor	Column 8 lines 27-29.	The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.	Page 248 line 35 to page 249 line 5.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.	
based on said step of detecting;	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 251 lines 3-8.  Page 253 lines 10-11.	Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.  Finally, controller, 391, transmits particular detection-complete information to controller,	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 253 lines 19-22.  Page 258 lines 10-19.	20; ...  Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.  Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
controlling said processor to output specific information in response to said step of inputting; and	Column 9 lines 53-57.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...  Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.	Said radio-detection-complete information

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
coordinating two	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>251 lines 8-11.</p> <p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p>
		<p>causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p>
	At this point, an instruction signal is	At this point, an instruction signal is

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
predetermined sequences on the basis of information received from said processor based on said step of controlling.	page 20 line 2.	generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	26 line 2.  Page 37 line 26 to page 38 line 8.	generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.	
<u>ONE OF:</u>	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<u>OR:</u>	Column 19 lines 56-59.	generated graphic is pictured.  The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.  For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to  generate several graphic video overlays, ...	Page 23 line 35 to page 24 line 16.  Page 451 lines 7-11.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			and to transmit these overlays to TV set, 202,  upon command.	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
44. The method of claim 43, wherein a buffer is operatively connected to said processor for buffering input, said method further comprising the step of:	Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.
				Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			Page 156 line 33 to page 157 line 10.	<p>Fig. 3A shows one such preferred controller, 39.</p> <p>One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series. Buffer, 39A, and processor, 39B, are the first buffer and processor of the series and perform the forward error correcting functions of controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. Buffer, 39E, and control processor, 39J, are the third buffer and processor. All controlled functions invoked at controller, 39, by received SPAM signals are invoked at control processor, 39J.</p>
inputting said instruct-to-react signal directly to said processor.	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 157 line 34 to page 158 line 1.	<p>As Fig. 3A shows, each processor, 39B, 39D, and 39J, has associated RAM and ROM and, hence, constitutes a programmable controller in its own right.</p> <p>Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.</p> <p>Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...</p> <p>Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a</p>
	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to	Page 251 lines 3-8.  Page 253 lines 10-11.  Page 253 lines 19-22.  Page 258 lines 10-19.	

Claim Language	Reference	Language	Reference	Support to instant specification. Language
		<p>inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.</p>	<p>Page 254 line 23 to page 255 line 3.</p>	<p>predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>... information and transmit it to digital detector, 34; causing digital detector, 34, to detect the binary information of said signal information and transfer said binary information to controller, 39. Receiving said binary information at controller, 39, causes the binary SPAM information of the wireless channel 5 transmission to be checked and corrected, as necessary, at processor, 39B; converted into locally usable binary information at processor, 39D; and checked for end of file signal information at EOFs valve, 39F, and transmitted to the null output of matrix switch, 39I, until EOFs valve, 39F, detects an end of file signal. In due course, said EOFs valve, 39F, receives the aforementioned end of file signal causing said valve, 39F, to detect said signal and transmit the aforementioned interrupt signal of EOFs-signal-detected information to said control processor, 39J. Receiving said EOFs-signal-detected ...</p> <p>In due course said remote wireless station transmits the end of file signal that terminates said information segment, and the EOFs valve, 39F, of decoder, 30, receives and detects said signal, in its end of file detecting fashion, causing said valve, 39F, to transmit the aforementioned EOFs-signal-detected</p>
			<p>Page 259 lines 3-29.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				<p>information to said control processor, 39J. Just as applied in the case of the 2nd command (#5), receiving said EOFs-signal-detected information causes control processor, 39J, to cause EOFs valve, 39F, to discard all information of said end of file signal; to cause said matrix switch, 39I, to cease transferring SPAM message information from said EOFs valve, 39F, to its null output information and commence transferring SPAM message information from said valve, 39F, to said control processor, 39J; then to cause EOFs valve, 39F, to recommence processing inputted signal words in its preprogrammed fashion and transferring said words to matrix switch, 39I; and to commence waiting to receive from said switch, 39I, the binary information of a subsequent SPAM header.</p> <p>Subsequently, said remote wireless station transmits the second combining synch command of the "Wall Street Week" program. (Hereinafter, said command may be called the "3<sup>rd</sup> command (#5).")</p>
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45. The method of claim 43, wherein said processor processes a datum designating a television channel or a television program or one or more specific channels of a	Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
multichannel cablecast or broadcast transmission, said method further having one step of the group consisting of:	Column 6 lines 23-26.			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...
					Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.
controlling a tuner to tune a receiver or converter to receive	Column 19 lines 27-29.			Page 439 lines 14-15.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.
				Page 29 lines 4-7.	... to receive the transmission of cable channel 13; ...  Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
	Column 19 lines 27-29.		...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
said television channel or said television program or said one or		"Wall Street Week."		of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
processed datum.	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	<p>Page 446 lines 17-21.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	<p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
more specific channels	Column 19 lines 1-4.	In the same fashion, microcomputer, 205,	Page 419 line 34 to	Fig. 7C illustrates methods for monitoring

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
designated by said processed datum;			may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	page 420 line 2.  Page 11 lines 5-10.	multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a selective transfer device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
a control signal detector at least some portion of said television channel or said television program or said one or	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...		Page 446 lines 17-21.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
more specific channels designated by said processed datum;				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
				Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.		Page 419 line 34 to page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.
				Page 11 lines 5-10.	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a control signal detector to search for one or more control signals in said	Column 17 lines 28-33.	... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods		Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
television channel or said television program or said one or		Column 19 lines 1-4.	of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)  In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.		can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...  Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
more specific channels designated by said processed datum;				Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	
controlling a selective transfer device to		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
input to a computer control signals detected in said television channel or said		Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
television program or said one or		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
more specific channels designated by said processed datum;	Column 19 lines 1-4.	These signals instruct microcomputer, 205, ...  In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 24 lines 5-6.  Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a computer to respond to	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Language	Reference	Language
control signals detected in said television channel or said television program or said one or	<p>Column 19 lines 46-53.</p> <p>instruction signals embedded in the "Wall Street Week" programing transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the</p>
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.		



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
more specific channels designated by said processed datum;	Column 19 lines 1-4.	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.</p>	<p>Page 419 line 34 to page 420 line 2.</p> <p>Page 11 lines 5-10.</p>	<p>subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.</p> <p>The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.</p>
controlling a television monitor to display video or audio contained in said television channel or said television program or said one or	Column 19 lines 27-29.	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and</p>
more specific channels designated by said processed datum;	Column 19 lines 1-4.	<p>In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television</p>	<p>Page 419 line 34 to page 420 line 2.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		channels and/or radio channels for programming of interest to play or record.	Page 11 lines 5-10.	receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling storage device to process video or audio contained in said television channel or said television program or said one or	Column 19 lines 23-27.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... ... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....
			Page 439 lines 9-15.	
			Page 295 lines 6-8.	
			Page 439 lines 9-15.	
			Page 445 lines 24-27.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
more specific channels designated by said processed datum; and		Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 446 lines 18-23.  Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.  Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a selective transfer device to communicate to a storage device or a television monitor said television channel or said television program or said one or		Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 437 lines 1-6.          Page 295 lines 6-8.   Page 439 lines 9-15.  Page 445 lines 24-27.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.  Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;  ...  ... instructions causes controller, 20, ... to

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
more specific channels designated by said processed datum.	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record.	Page 446 lines 18-23.	switch power on to video recorder/player, 217, ...
			Page 445 line 24 to page 446 line 1.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			Page 445 line 35 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
			Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Page 419 line 34 to page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.
			Page 11 lines 5-10.	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.

46.	A method of	Column 19 lines 63 to	This signal is identified by decoder, 203,	Page 26 lines 1-2.	Said signal is identified by decoder, 203;
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a processor for	Column 6 lines 23-26.	office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.	station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
passing and	Column 7 lines 47-49.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
executing instructions and	Column 7 lines 50-58.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.	
a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:	Column 7 lines 60-64.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 10-18.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
		Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	
		Processor or monitor, 12, communicates with clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.		Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiving a broadcast or cablecast transmission;		Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
demodulating said broadcast or cablecast transmission to detect an information transmission thereon,		Column 6 lines 45-48.	The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.	Page 34 lines 31-35.	The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.
said information transmission comprising an instruct signal		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
which is effective to coordinate	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			Page 451 line 3.	And the Fig. 1C combining is displayed.



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
<u>ONE OF:</u>  two predetermined sequences;		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
		Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
	<u>OR:</u>  two predetermined sequences;	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			generate several graphic video overlays, ...  and to transmit these overlays to TV set, 202,  upon command.	Page 451 lines 7-11.  Page 26 lines 4-8.  Page 44 lines 14-17.  Page 26 lines 20-28.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
detecting said instruct signal on said information transmission and passing said instruct signal to said processor;	Column 6 lines 48-50.  Column 7 lines 6-11.	This base band signal is then transmitted through separate paths to three separate detector devices.  If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for	Page 34 line 35 to page 35 line 1.  Page 29 line 33 to page 30 line 5.	This base band signal is then transferred through separate paths to three separate detector devices.  Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	other channels of interest.				
	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
delaying, under processor control, the passing of said instruct signal to a controllable apparatus;	Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to <b>delay</b> the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to <b>delay</b> in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.	
passing said instruct signal to said controllable apparatus	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
on the basis of a timing signal; and	Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and <b>when</b> and <b>where</b> and how to determine which signals to pass to buffer/comparator, 14.	Page 33 lines 18-20.  Page 149 lines 8-15.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...  Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, to <i>execute particular preprogrammed transfer- and-meter instructions</i> ...	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
				For example, page 150 lines 29-35.	Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message <i>under control of said transfer-and-meter instructions</i> commencing with the first of said H bits and transferring information, ...  ... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence <i>executing the meter instructions of said transfer-and-meter instructions</i> . Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2):")  Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.
		Column 8 lines 56-58.  See Fig. 1.	To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus.	Page 33 lines 18-21.  See Fig. 2.	
controlling said controllable apparatus based on said instruct signal.	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 451 line 3.	generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
47. A method of controlling at least	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 390 lines 30-35.  Page 396 lines 8-10.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6, and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the
one of a plurality of receiver stations each of which	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
includes a broadcast or cablecast receiver,	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 4-15.	following individual examples. Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	
a processor,	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
a signal detector, said signal detector adapted to detect signals within a broadcast or cablecast transmission, and	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices. See Fig. 1	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices. See Fig. 2	
said processor programmed to	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.	
respond to detected signals communicated from said detector, and said method comprising the steps of:	Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or	Page 31 lines 10-18.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	signals are to be passed externally, processor unit, 12, identifies, in a predetermined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.		signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.		
(1) receiving at a broadcast or cablecast transmitter station a first instruct signal which is effective at said at least one of a plurality of receiver stations to	Column 10 lines 30-39.	The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programing transmissions.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.	Page 324 lines 23-31.	
coordinate	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	The present invention employs signals embedded in programming.	Page 13 lines 25-26.	
	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	





Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<u>OR:</u>				so-called "NASDAQ" index.
two predetermined sequences;	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(2) transferring said first instruct signal to a first transmitter;		Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 324 line 31 to page 325 line 4.	called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...  Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
(3) receiving one or more first control signals at said transmitter station,		Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
said control signals addressing said first instruct signal to said processor of at least one specific receiver station; and		Column 4 lines 5-6.  <i>In General</i> Column 17 lines 39- 44.	These techniques employ signals embedded in programs.  Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to	Page 13 lines 25-26.  <i>In General</i> Page 15 lines 16-23.	The present invention employs signals embedded in programming.  The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
	<p>such equipment as directed.</p> <p><i>Specifically</i> Column 20 lines 27-32.</p> <p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...</p>		<p>Page 34 lines 24-26.</p> <p>Page 44 lines 14-15.</p> <p>Page 95 lines 18-21.</p> <p><i>Specifically</i> Page 471 line 26 to page 472 line 17.</p>	<p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p>
(4) transferring said one or more first control signals to one of said first transmitter and a second	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and

Claim Language		Support to parent application filed November 3, 1981:		Support to instant specification.	
		Reference	Language	Reference	Language
transmitter, said transmitter station			equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.		78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
broadcasting or cablecasting	Column 10 lines 15-20.		The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
said first instruct signal and said one or more first control signals to said plurality of receiver stations.	Column 20 lines 27-32.		Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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48. The method of claim 47, wherein at least one of said first instruct signal and said one or more first control signals are embedded in the non-visible portion of a television signal.	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 4 lines 18-22.	In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 14 lines 6-11.	In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.

49. The method of claim 47, wherein a switch communicates signals selectively between a receiver and one of a memory or recorder and said transmitter, said method further comprising one from the group consisting of:		Matrix Switch, 75, in Fig. 3B.		Matrix Switch, 75, in Fig. 6A.
		TV receiver 53, in Fig. 3A.		TV receiver 53, in Fig. 6A.
		VTR, 78, in Fig. 3B.	Page 324, line 35.	78, in Fig. 6A. recorder/players, 76 and 78
detecting a second control signal which is		Recorder and Player, 76, in Fig. 3B.		Recorder and Player, 76, in Fig. 6A.
		Cable Channel Modulator, 83, in Fig. 3C.		Cable Channel Modulator, 83, in Fig. 6B.
	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
effective at the transmitter station to cause communication;		<p>schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...</p>	
determining a specific signal source from which to communicate at least one of said instruct signal and said first control signals to said transmitter;	Column 11 lines 50-54.	<p>For example, if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 lines 14-16.</p> <p>Page 328 lines 22-31.</p>	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling said switch to communicate at least one of said instruct signal and said first control signals to said transmitter	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.			programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
in response to a second control signal which is effective at the transmitter station to instruct communication;	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.		Page 328 line 31 to page 329 line 1.  Page 327 line 35 to page 328 line 13.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 84 lines 26-28.	... monitor information that identifies what programming is available, ...
				Page 28 lines 26-27.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling said switch to communicate at least one of said instruct signal and said first control signals from		Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 49 lines 26-27.  Page 328 lines 14-16.	Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
a selected signal source; and		Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 line 31 to page 329 line 1.    Page 328 lines 22-31.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
controlling said switch to communicate to said memory or recorder at least one of said instruct signal and said first control signals.		Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.

50. The method of claim 47, wherein a	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch,
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Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controller controls a switch to communicate to said transmitter a selected signal,		transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
further comprising one from the group consisting of:	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
detecting a second control signal which is effective at the transmitter station to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
cause transmission;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 lines 14-16.  Page 328 line 22 to page 329 line 1.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
inputting to said controller a second control signal which is effective to	Column 11 lines 38-46.	By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
control said switch;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 84 lines 26-28.	channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...
			Page 28 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 49 lines 26-27.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
			Page 328 lines 14-16.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
			Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given
controlling said switch	Column 11 lines 50-57.	... if controller/computer, 73, determines	Page 328 line 22 to	For example, computer, 73, receives a given

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
to communicate at least one of said instruct signal		that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	page 329 line 1.	SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
and said first control signals	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
according to a transmission schedule;	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling said switch to communicate from a specific one of				<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	<p>received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
		Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
	a plurality of signal sources; and	Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.  When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.	
controlling said switch to communicate at least one of said instruct and said first control signals to a selected one of	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
a plurality of transmitters.	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and	

Claim Language	Support to parent application filed November 3, 1981.	
	Reference	Language

		combining and multiplexing system, 92.		multiplexing system, 92.
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51. The method of claim 47, further comprising one from the group consisting of: transmitting to a receiver station	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
one or more data that designate	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
a time or a channel of transmission of said instruct signal; and	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
transmitting to a receiver station one or more data that specify	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is	Page 436 line 9 to page 437 line 3.	<p>processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
	Page 439 lines 14-15.			
	Page 59 lines 29-33.			A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
the title of or some		transmitted in the programming transmission.	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 14 line 32 to page 15 line 2.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			<p>can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p>	<p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular AT&amp;T news item in a particular Transmit-AT&amp;T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p>
	<p>Page 268 line 28 to page 269 line 12 from example #5.</p>		<p>Page 420 line 32 to page 421 line 17.</p>	
	<p>Column 18 lines 52-55.</p>	<p>The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.</p>		<p>All eight of said messages are commands.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
subject matter contained in a unit of mass medium programming or	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
data associated with said instruct signal; and	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 439 lines 14-15.  Page 449 lines 13-35.	<p><i>the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</i></p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well</p>

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification.	Reference	Language
transmitting to a receiver station a second control signal to	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.		known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.		
			<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--</p>		

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	
Reference	Reference	Reference	Language
<p>cause said receiver station to tune to</p>	<p>Column 19 lines 20-25.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Page 436 line 9 to page 437 line 6.</p> <p>Page 439 lines 9-15.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a broadcast or cablecast transmission		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
containing a specific instruct signal.				Page 445 line 24 to page 446 line 1..	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
		Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
			several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Language
	<p>Column 19 lines 60-66.</p>	<p>These signals instruct microcomputer, 205, ...</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	<p>a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
		<p>Page 24 lines 5-6.</p> <p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-8.</p>	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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52. The method of claim 47, wherein said one or more first control signals further comprise downloadable executable code	Column 19 lines 43-49.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>	<p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
	<p>Column 19 lines 46-48.</p>	<p>These signals instruct microcomputer, 205, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said downloadable executable code programming the way or method		Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
					Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
in which said at least one processor	Column 19 lines 48-53.	<p>These signals instruct microcomputer, 205,</p> <p>...</p> <p>... to generate several graphic video overlays, ...</p> <p>... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...</p>	<p>Page 24 lines 5-16.</p> <p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p>	<p>combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
		... transmit these overlays to TV set, 202,...	Page 26 lines 4-8.	
	Column 19 lines 64-66.	This signal instructs microcomputer, 205,	Page 26 lines 1-8.	Said signal is identified by decoder, 203;

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
signal.		to transmit the first overlay to TV set, 202,...		transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
53. The method of claim 47, wherein at least one receiver station is adapted to detect the presence of said one or more first control signals or	Column 9 lines 47-57.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
			Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.	Support to instant specification.
Reference	Reference	Language	Language	Language
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	<p>the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast,</p>
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG.</p>	<p>Page 265 line 27 to Page 266 line 21.</p>	<p>Page 250 lines 13-17.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>programmed to respond to said instruct signal</p> <p><u>First alternative</u></p> <p>on the basis of the location of a signal in an information transmission, said method further comprising the step of causing at least some of said control signal or instruct signal to be transmitted</p>		2B.	of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.		
			Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...	Page 251 lines 8-11.	
			... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.	Page 263 lines 19-24.	
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.	Page 37 lines 26-28.	
			Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	
			... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	
			A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission	Page 59 lines 29-33.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in said location.				<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p>	<p>consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
	Column 9 lines 31-33.	A digital signal is embedded by conventional generating and encoding means and transmitted in a television, radio or other transmission.		<p>... a first series of control instructions is generated, embedded sequentially on said line or lines of the vertical interval, and transmitted on the first and each successive frame of said television program transmission, signal unit by signal unit and word by word, until said series has been transmitted in full.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>... processes signal information embedded in an inputted radio frequency.</p> <p>... processes signal information embedded in a frequency other than a television or radio frequency.</p>	
				<p>Page 14 line 35 to page 15 line 2.</p> <p>Page 36 lines 2-3.</p> <p>Page 36 lines 19-20.</p>	
<u>Second alternative</u> on the basis of the location of a signal in an information	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is		Page 267 lines 20-28 from example #5.	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5)</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
transmission, said method further comprising the step of		being televised on channel X.	<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week"</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
causing at least	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 439 lines 14-15.  Page 328 line 22 to page 329 line 1.	<p><i>program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>
some of said control signal	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,	Page 21 lines 23-24.  Page 451 lines 6-7.	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
<p>or instruct signal to be transmitted</p>	<p>Column 19 lines 63-66.</p>	<p>several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p> <p>These signals instruct microcomputer, 205, ...</p> <p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,</p>	<p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 26 lines 1-8.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in said location.		Column 11 lines 46-50.			required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
			If incoming programing is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programing to the proper output channel.	Page 328 lines 18-22.	Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel.
54. The method of claim 43, wherein a first of said two predetermined sequences includes a medium program content and		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
		Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
a second of said two		Column 19 lines 48-53.	These signals instruct microcomputer, 205,	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
predetermined sequences includes a series of computer outputs from a receiver station computer.		... ... to generate several graphic video overlays, ...  ... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 451 lines 7-11.  Page 19 line 29 to page 20 line 20.	signal word or words which instruct it to ... ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		... transmit these overlays to TV set, 202,...	Page 26 lines 4-8.	
55. The method of claim 54, wherein an instruct-to-coordinate signal causes said receiver station to	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	<p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p> <p>Page 18 lines 24-27.</p>	<p>microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>commence outputting said sequence of mass medium program content.</p>	<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>page 450 line 27 to page 451 line 11.</p>	<p>presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
56. The method of claim 55, wherein a third predetermined sequence of instructions and said instruct-to-coordinate signal causes said receiver station to commence	Column 19 lines 43-44.  Column 19 lines 27-29.	... instruction signals embedded in the "Wall Street Week" programming transmission.  ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 21 lines 23-24.  Page 445 line 24 to page 446 line 1.	... instruction signals embedded in the "Wall Street Week" programming transmission.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
inputting said instructions to said computer.	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,	Page 21 lines 23-24.  Page 451 lines 6-7.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	
			Page 23 line 35 to	Subsequently, a second series of instructions	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			<p>several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	page 24 line 4.	is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
57. The method of claim 54, wherein an instruct-to-coordinate signal causes said receiver station to generate at least two images from said series of computer outputs.	Column 19 lines 43-53.		<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
				Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of





Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>transmit these overlays to TV set, 202,</p> <p>upon command.</p> <p>FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>	<p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			<p>microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
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58. The method of claim 54, wherein an instruct-to-coordinate signal causes said computer to output at least a first of said series of computer outputs.	Column 19 line 60 to column 20 line 1.	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber</p>
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Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			Page 26 lines 4-11.	station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
	Column 19 lines 31-34.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.  The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
					a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
59. The method of claim 54, wherein said sequence of mass medium program content includes only some of	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.	
a portion of television program and said series of computer outputs	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.	
includes a balance of	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
	Column 19 line 64 to	This signal instructs microcomputer, 205,	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said television program.	column 20 line 1.	to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...			the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
60. The method of claim 59, wherein said only some of said television program includes only some of a series of video images of said television program, and said series of computer outputs	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.		Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.		Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
includes the balance of said series of video images.		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
61. The method of claim 59, wherein said series of computer outputs includes a receiver specific datum and said receiver station presents individualized television program.		Column 19 line 64 to column 20 line 1.  Column 19 lines 67 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-10.  Page 451 line 3. Page 26 lines 8-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
62. The method of claim 59, wherein said sequence of mass medium program content is		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
received at said receiver station in a television signal, said method further comprising the steps of:	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	image of said graphic as it appears on the video screen of TV monitor, 202M.  For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
detecting an instruct-to-generate signal in said television signal; and	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
		<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined</p>
	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p> <p>These signals instruct microcomputer, 205,</p> <p>to generate several graphic video overlays,</p> <p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p>	<p>Page 19 line 29 to page 20 line 20.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in accordance with said instruct-to-generate signal.		Column 19 lines 48-53.	generated graphic of his own stocks' performance ...		monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
			These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
			and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
63. The method of claim 56, wherein said third predetermined sequence is detected in an analog television signal.	Column 19 lines 43-49.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p> <p>These signals instruct microcomputer, 205, ...</p> <p>This line receiver, 33, detects the existence of an embedded signal or signals in one or more of the lines normally used to define a television picture.</p>	<p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 35 lines 7-9.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>Said line receiver, 33, receives the information of one or more of the lines normally used to define a television picture.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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64. The method of claim 56, wherein said third predetermined sequence is detected in a digital television signal.	Column 19 lines 43-49.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	Page 21 lines 23-24.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
		<p>These signals instruct microcomputer, 205, ...</p> <p>The digital detector, 37, through standard detection techniques well known in the art, determines whether a particular signal is present in the transmission in a predetermined fashion.</p>	Page 37 line 26 to page 38 line 8.	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
	Column 6 lines 64-67.		Page 24 lines 5-6.	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>The digital detector, 37, detects signal information embedded in said audio information and inputs detected signal information to controller, 39.</p>
	Column 3 lines 6-8.	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>	Page 14 line 35 to page 15 line 2.	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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65. The method of claim 46, wherein a first of said predetermined sequences includes a sequence of mass medium program content and	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
a second of said predetermined sequences includes a series of a computer outputs from a receiver station computer.	Column 19 lines 48-53.	These signals instruct microcomputer, 205, ...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
		... to generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		... transmit these overlays to TV set, 202,...	Page 26 lines 4-8.	<p>information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
66. The method of claim 65, wherein said instruct signal causes said receiver station to	Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
				<p>Said instructions contain one instance, and ... program-unit-of-interest information that is programmed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CCI3-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>commence outputting said sequence of mass medium program content.</p>	<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p>	<p>Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>	<p>Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
	<p>67. The method of claim 66, wherein a third predetermined sequence includes a series of instructions and said instruct signal causes said receiver station to</p>	<p>Column 19 lines 43-44.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Page 21 lines 23-24.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
commence		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
inputting said instructions to said computer.		Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 446 lines 17-21.  Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  ... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
68. The method of claim 65, wherein said instruct signal causes said receiver station to generate at least some of two or more images of said series of computer outputs.	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	The viewer then sees a microcomputer	Page 26 lines 4-11.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			generated graphic of his own stocks' performance ...		subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
69. The method of claim 65, wherein said instruct signal causes said computer to output at least a first of said series of computer outputs.	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		performance ...		overlaid on the studio generated graphic. And microcomputer, 205, commences ...
	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
70. The method of claim 65, wherein said sequence of mass medium program	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
content includes only some of		Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.  For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
a television program and said series of computer outputs		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
includes a balance of said television program.		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
71. The method of claim 70, wherein said only some of said		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did in the past week," and a studio	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language	
television program includes only some		generated graphic is pictured.			over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
of a series of video images of said television program, and said series of computer outputs	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.		During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.		And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
includes the balance of said series of video images.	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
72. The method of claim 70, wherein said	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 4-10.		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
series of computer outputs includes a receiver specific datum and said receiver station presents an individualized television program.		Column 19 lines 67 to column 20 line 2.	for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 451 line 3. Page 26 lines 8-11.	information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		
73. The method of claim 70, wherein said sequence of mass medium program content is		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
		Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
received at said receiver		Column 19 lines 27-29.	...and also microcomputer, 205, may	Page 445 line 24 to	... instructions causes controller, 20, to switch



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
station in a television signal, said method further comprising the steps of:		instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	page 446 line 1.  Page 446 lines 17-21.	power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
detecting an instruction-generate signal in said television signal; and	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.  Page 24 lines 5-16.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
	to generate several graphic video overlays,		Page 451 lines 7-11.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to		Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
	transmit these overlays to TV set, 202,		Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	upon command.		Page 44 lines 14-17.	A command is an instance of signal



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		<p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
74. The method of claim 67, wherein said third predetermined sequence is detected in an analog television signal.	Column 19 lines 43-49.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,</p>	<p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
	Column 6 lines 54-57.	These signals instruct microcomputer, 205, ...  This line receiver, 33, detects the existence of an embedded signal or signals in one or more of the lines normally used to define a television picture.	Page 24 lines 5-6.  Page 35 lines 7-9.	Said line receiver, 33, receives the information of one or more of the lines normally used to define a television picture.
75. The method of claim 67, wherein said third predetermined sequence is detected in a digital television signal.	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
			Page 37 line 26 to page 38 line 8.  Page 24 lines 5-6.	The digital detector, 37, detects signal information embedded in said audio information and inputs detected signal information to controller, 39.
	Column 6 lines 64-67.	These signals instruct microcomputer, 205, ...  The digital detector, 37, through standard detection techniques well known in the art, determines whether a particular signal is present in the transmission in a predetermined fashion.	Page 35 lines 24-27.	
76. The method of claim 47, wherein a first of said two predetermined sequences coordinated at said at least one receiver station includes a sequence of mass medium program content and	Column 19 line 53-56.          Column 19 lines 56-59.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.  The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 25 lines 26-33.  Page 451 lines 25-32.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.  For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a second of said two predetermined sequences includes a series of computer outputs.	Column 19 lines 48-53.	These signals instruct microcomputer, 205, ... ... to generate several graphic video overlays, ...	Page 24 lines 5-16. Page 451 lines 7-11.	stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ... ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	
		... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...  ... transmit these overlays to TV set, 202,...	Page 19 line 29 to page 20 line 20.  Page 26 lines 4-8.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	
77. The method of claim 76, further comprising the step of transmitting said	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
sequence of mass medium program content to said at least one of a plurality of receiver stations.		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
78. The method of claim 77, further comprising the step of embedding said first instruct signal in an information transmission		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and



Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
containing said sequence of mass medium program content.	Column 19 lines 24-25.	... microcomputer, <b>205</b> , may instruct tuner, <b>214</b> , to switch box, <b>201</b> , to channel X...	Page 295 lines 6-8.
	Column 19 lines 27-29.	...and also microcomputer, <b>205</b> , may instruct switch, <b>216</b> , to turn TV set, <b>202</b> , on and tuner, <b>215</b> , to tune appropriately to "Wall Street Week."	Page 439 lines 9-15.  Page 445 line 24 to page 446 line 1.
79. The method of claim 78, wherein said first instruct signal is embedded in said information transmission	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 21 lines 23-24.  Page 451 lines 6-7.
		several instruction signals are identified by decoder, <b>203</b> , and transferred to microcomputer, <b>205</b> .	Page 23 line 35 to page 24 line 4.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
before at least some of said sequence of mass medium program content is				Page 37 line 26 to page 38 line 8.	detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 19 line 53-56.	These signals instruct microcomputer, 205, ...  Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.		Page 24 lines 5-6.  Page 25 lines 26-33.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...		Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
80. The method of claim 76, wherein said first instruct signal causes said receiver station to commence outputting at least some	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer,		Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5)

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
portion of one of said sequence of mass medium program content and		205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 436 line 9 to page 437 line 3.</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Page 439 lines 14-15.</p>	<p>and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
	<p>Column 19 lines 23-29.</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>		<p>Page 437 lines 1-6.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Page 295 lines 6-8.</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>Page 439 lines 9-15.</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Page 445 lines 24-27.</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>Page 446 lines 18-23.</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>Page 446 lines 17-21.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said sequence of computer outputs, said method further comprising the step of	Column 19 lines 43-49.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
	Column 19 line 60 to column 20 line 1.	<p>These signals instruct microcomputer, 205, ...</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or</p>
transmitting a second instruct signal which operates at said receiver station to deliver at an output device at least a portion of said series of computer outputs.				

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				page 38 line 8.	47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
81. The method of claim 80, further comprising the step of embedding said second instruct signal	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is	Page 25 line 33 to page 26 line 2..	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in a signal containing one of said two predetermined sequences			transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...		studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
					Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.
					The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...	Page 295 lines 6-8.	201, and to signal processor, 200.  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...	
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	
	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
before transmitting said second instruct signal.			Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...	
82. The method of 81, wherein said second instruct signal operates at said at least one of said plurality of receiver stations to	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks'	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
generate at least a portion of said series of computer outputs.	Column 19 lines 48-53.	performance ...			displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
		These signals instruct microcomputer, 205, to		Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...		Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		and to transmit these overlays to TV set, 202,		Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.		Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
83. A method at a receiver station of coordinating the processing of		Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Examples of signal words are a string of one</p>
data and		Column 3 lines 6-8.	Examples of signal words are a string of	Page 14 line 35 to page	

Claim Language		Support to parent application filed November 3, 1981:		Support to instant specification.	
		Reference	Language	Reference	Language
television programming to		Column 19 line 53-56.	one or more digital data bits encoded together on a single line of video or sequentially in audio.  Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	15 line 2.  Page 25 lines 26-33.	or more digital data bits encoded together on a single line of video or sequentially in audio.  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	present a locally pertinent output, said method comprising the steps of:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
selecting a datum of interest;		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
storing the selected datum of interest;		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
receiving a plurality of units of television programming at the receiver station;	Column 9 lines 47-57.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.	apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.  Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.  Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically
		The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Page 257 line 24 to page 258 line 19.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p>	<p>oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Reference	Language
		<p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies</p>
	<p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p>	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>
	<p>Column 19 lines 18-20.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
selecting one of the plurality of received units of television programming;	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.  Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned information--whether-to-select instructions that

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....</p>
	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 439 lines 14-15.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	
outputting the selected unit of television programming at at least one output device at the	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor,



Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
receiver station;		202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	
	Column 19 line 53-56.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 446 lines 17-21.
		During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.	Page 25 lines 26-33.
receiving a plurality of control signals;	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.
		Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.	Page 23 line 35 to page 24 line 4.
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a	Page 37 line 26 to page 38 line 8.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
generating a locally	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	<p>predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p>	<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 26 lines 1-8.</p> <p>Page 37 line 26 to page 38 line 8.</p>	
generating a locally	Column 19 lines 67 to	The viewer then sees a microcomputer	And the Fig. 1C combining is displayed.	Page 451 line 3.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
pertinent display based on the stored datum of interest;		column 20 line 2.  Column 19 lines 39-41.	generated graphic of his own stocks' performance overlay the studio generated graphic.  [Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
outputting the locally pertinent display to the at least one output device to		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
present the locally pertinent output comprising the outputted unit of television program and the outputted locally pertinent display,		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
at least one of said steps of generating and outputting the locally pertinent display being performed in response		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203,	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer,

Claim Language	Support to parent application filed November 3, 1981. Reference.	Language	Support to instant specification. Reference	Language
to at least one of		and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 37 line 26 to page 38 line 8.	205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV
said received plurality of control signals.	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 451 line 3. Page 26 lines 1-8.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
	These signals instruct microcomputer, 205,	<p>to generate several graphic video overlays,</p> <p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p> <p>transmit these overlays to TV set, 202,</p>	<p>Page 24 lines 5-16.</p> <p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			upon command.	Page 44 lines 14-17.	monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
				Page 26 lines 20-28.	
84. A method of coordinating the output of a local output	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.		Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	<p>process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs the microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,</p>
a computer for generating said local output,	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 390 lines 30-35.
a detector operatively connected to said computer, and	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 21 lines 20-24.
	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 8-11.
			Page 26 lines 1-2.
			Page 37 line 26 to page 38 line 8.



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one output device, said method comprising the steps of:	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  This base band signal is then transferred through separate paths to three separate detector devices.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 34 line 35 to page 35 line 1.  Page 445 line 24 to page 446 line 1.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 446 lines 17-21.	
	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	
selecting at least one datum of interest;					
storing the selected at	Column 19 lines 39-41.	[Microcomputer, 205.] records those		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
least one datum of interest;			prices that relate to the stocks in its stored portfolio.		stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
receiving a digital information transmission containing	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.		Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.		Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct		Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
(i) programming to be outputted in a television presentation and				Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
(ii) a control signal;		microcomputer, 205, ... upon command.		microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
					information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
detecting the control signal in the digital information transmission;	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  This base band signal is then transferred through separate paths to three separate detector devices.
generating the local output based on said stored selected at	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
to present an output at the at least one output device including the local output.	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 451 line 3. Page 26 lines 8-11.	subscriber's own portfolio performance  And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...	
85. The method of claim 84, wherein said step of receiving comprises the step of receiving television programming.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
86. The method of claim 84, said at least one output device includes a display device, said method further comprising the step of	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
displaying the received digital information transmission containing	Column 19 line 67 to column 20 line 1.  Column 20 lines 5-7.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  ... and [microcomputer, 205.] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 446 lines 17-21.  Page 26 lines 8-11.  Page 27 lines 7-9 and  Page 451 line 22 to Page 452 line 5.	<p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(i) programming to be outputted in a television presentation at the display device.		Column 19 lines 31-34.	FIG 6C can also illustrate how <b>programming delivered at different times</b> to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
87. The method of claim 86 wherein said step of generating comprises the step of generating a visual display pertaining to		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>user</p> <p>based on said stored selected at least one datum.</p>	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p>	
<p>88. The method of claim 87 wherein said step of outputting comprises the step of outputting to the display device the generated visual display in response to said step of detecting to</p>	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>present an output on the display device including television programming to be outputted in a television presentation and the generated visual display, said television programming to be outputted in a television presentation and said generated visual display being outputted</p> <p>one of sequentially and</p>		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>Column 19 lines 67 to column 20 line 2.</p>	<p>This signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
	<p>Column 20 lines 5-7.</p>	<p>... and [microcomputer, 205.] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>	<p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in</p>	<p>Page 27 lines 7-9 and</p> <p>Page 451 line 22 to Page 452 line 5.</p>	<p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
in combination.	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.  Page 451 line 3.  Page 26 lines 8-11.	comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient. In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synchronizing commands.
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
89. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					<p>his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 8-11.	
selecting a datum of interest, said step of selecting comprising:	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-35.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>fashions, the information of said item.)</p> <p>Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p>
(a) storing at the receiver station an identification signal identifying the datum of interest;	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	<p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.</p>
(b) receiving from a remote data source a plurality of data including the datum of interest, each of said plurality of data comprising	Column 18 lines 48-51.  Column 19 lines 35-37.	<p>Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.</p>	<p>Page 420 lines 21-29.</p> <p>Page 449 lines 13-26.</p>	<p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
an identification signal and		Column 18 lines 52-55.	The news services preceed each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
		Column 18 lines 52-55.	The news services preceed each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
an information signal;		Column 18 lines 52-55.	The news services preceed each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of said AT&T news item and subject matter information of said binary
		Column 18 lines 52-55.	The news services preceed each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(c) comparing the identification signal of the datum of interest to the identification signals of each of the received data;		Column 18 lines 56-58.			information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
		Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 420 lines 6-20.  Page 422 lines 33 to Page 423 line 4.  Page 449 lines 13-20.	The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".  ...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	(d) selecting the datum of interest from the plurality of received data based on said step of comparing;	Column 18 lines 43-45.	Figure 6C illustrates methods for monitoring multiple programming channels and selecting programming and information in a predetermined fashion.	Page 419 line 34 to Page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.





Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast,</p>
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG.</p>	<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	2B.		of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.	
			Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...	
			... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.	
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.	
			In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...	
			All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
			In example #5, controller, 12, is preprogrammed to process monitor	
	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 251 lines 8-11.  Page 263 lines 19-24.  Page 37 lines 26-28.  Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	
			Page 268 line 28 to page 269 line 12 from	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			example #5.	information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
selecting one of the plurality of received units of programming;	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor,</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
outputting the selected unit of programming on an output device at the receiver station;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 446 lines 17-21.  Page 25 lines 26-33.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital
	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 26 lines 1-8.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
generating a local display based on at least the information signal of the stored datum of interest;					of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
	Column 19 line 67 to column 20 line 1.  Column 19 lines 39-41.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  [Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.		Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
outputting the local display to the output device to	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
present the local output comprising a portion of the outputted unit of television program and the outputted local	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own





Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said received plurality of control signals.	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	These signals instruct microcomputer, 205,		Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
	to generate several graphic video overlays,		Page 451 lines 7-11.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to		Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
	<p>transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>
		<p>composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
<p>90. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:</p>	<p>Column 19 lines 31-34.</p>	<p>FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>
		<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>
		<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
				<p>apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>
receiving data in at least one information channel;	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)  Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
selecting at least a portion of said received data that is of interest to the user;		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
storing said selected at least said portion of said data;		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
receiving television programming and a control signal in said at least one information		Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a	Page 436 line 9 to page 437 line 6.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
channel;			predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...		information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 439 lines 9-15.	
				Page 295 lines 6-8.	
				Page 439 lines 9-15.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
detecting the control signal in the at least one information channel;		Column 19 lines 43-49.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 21 lines 23-24.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
		Column 6 lines 48-50.	<p>These signals instruct microcomputer, 205, ...</p> <p>This base band signal is then transmitted through separate paths to three separate detector devices.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 34 line 35 to page 35 line 1.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>
generating local graphic by processing said stored selected at least said portion of said data;		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
outputting to a monitor the generated local graphic based on said step of detecting to present a visual display on the monitor comprising the local graphic.	Column 19 line 60 to column 20 line 1.	portfolio.  At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by <b>decoder, 203</b> , and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.  Page 26 lines 4-11.	transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by <b>decoder, 203</b> ; transferred to microcomputer, 205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Reference	
		Language		Language	
		<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>This base band signal is then transmitted through separate paths to three separate detector devices.</p>	<p>Column 6 lines 48-50.</p>	<p>displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>	<p>Page 34 line 35 to page 35 line 1.</p>
91. The method of claim 90 wherein at least one of said steps of receiving comprises receiving said at least one information channel, said at least one information channel comprising a digital information transmission.	<p>Column 19 lines 35-37.</p>	<p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.</p>	<p>Page 449 lines 13-26.</p>	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>	
92. The method of claim 90 wherein at least one of said steps of receiving comprises the step of automatically querying a data service to obtain at least one of said data,	<p>Column 19 lines 35-41.</p>	<p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p>	<p>Page 449 lines 13-35.</p>	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
	Reference	Reference	Language
<p>said television programming and</p>	<p>Column 15 lines 20-25.</p>	<p>In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.</p>	<p>preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information. And for example, the transmitted programming ...</p> <p>At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....</p> <p>... each station where a match fails to occur--which indicates that a decryptor, 224,</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said control signal.		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 308 line 35 to page 309 line 3.  Page 21 lines 23-24.	is not decrypting its received information correctly ...  At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...  ... instruction signals embedded in the "Wall Street Week" programming transmission.
93. The method of claim 90 wherein at least one of said steps of receiving comprises the step of receiving a first information transmission from one of a broadcast and a cablecast television transmission source,	Column 6 lines 23-30.	Column 19 lines 35-37.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.  Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 29 lines 4-15.  Page 449 lines 13-26.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific
said first information transmission comprising a digital information channel.					

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
					fashions, the information of said item.)
94. A method at a receiver station of coordinating the processing of	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>	
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.		
	Column 19 lines 35-41.	Each weekday, microcomputer, 205,	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
output, said method comprising the steps of:			receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
storing identification information identifying	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.		Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
data of interest to the user;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
receiving data over an information channel;		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
comparing the received data to the stored identification information;		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
selecting, based on said step of comparing, the data of interest to the user from the received		Column 18 lines 43-45.	Figure 6C illustrates methods for monitoring multiple programming channels and selecting programming and information in a predetermined fashion.	Page 419 line 34 to Page 420 line 2.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			These signals instruct microcomputer, 205, ...	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
generating a local graphic based on said stored selected data;	Column 19 line 67 to column 20 line 1.  Column 19 lines 39-41.		The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  [Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
outputting to a monitor the generated graphic based on said step of detecting to present	Column 19 line 64 to column 20 line 1.		This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it	Page 26 lines 1-2.  Page 37 lines 26 to	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47,



Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference	Language
	receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		page 38 line 8.	
		Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance
		Page 451 line 3.	And the Fig. 1C combining is displayed.
		Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
a visual display on the monitor including the local graphic.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		
	Column 19 line 67 to column 20 line 1.		
95. A method at a receiver station of coordinating the processing of	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
		<p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>
	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>	<p>page 450 line 27 to page 451 line 11.</p>
<p>data to present a local output, said method comprising the steps of:</p>	<p>Column 3 lines 6-8.</p>	<p>Page 14 line 35 to page 15 line 2.</p>
<p>receiving one of a television broadcast and a television cablecast transmission, said transmission comprising</p>	<p>Column 6 lines 23-30.</p>	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
television programming,	Column 19 line 53-56.	television antenna of conventional design.  Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	television antenna of conventional design.  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.	
data, and	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
a control signal;	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
detecting the data in the transmission;	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)	
selecting at least a	Column 19 lines 39-41.	[Microcomputer, 205,] records those	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
portion of said detected data that is of interest to the user;			prices that relate to the stocks in its stored portfolio.		stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
storing said selected data;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
detecting the control signal in the transmission;	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in	Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
generating a local graphic based on said stored selected data;	Column 19 line 67 to column 20 line 1.  Column 19 lines 39-41.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  [Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.		Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
outputting to a monitor the generated local graphic based on said step of detecting to present	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a visual display on the monitor including the local graphic.			This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Page 26 lines 4-11.	of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
		Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
96. A method at a receiver station of coordinating the processing of		Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.
				page 450 line 27 to page 451 line 11.	(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
data to present a local output, said method comprising the steps of:	See Fig. 6C.		See Fig. 7C.	<p>his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
storing identification information identifying data of interest to the user;	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	<p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.</p>
receiving a plurality of information channels;	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	<p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
scanning each of said channels;	Column 18 lines 58-59.	Signal processor, 200, scans sequentially all channels.	Page 422 lines 23-25.	201, and to signal processor, 200.  At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.
identifying one of said plurality of information channels containing the data of interest to the user;	Column 18 lines 59-62.	When [signal processor, 200] identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
tuning to the identified channel;	Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13.  Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...  Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmit particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.
detecting the data of interest received on the identified channel;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data





Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
detecting the control signal in the information transmission;	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.  ... instruction signals embedded in the "Wall Street Week" programming transmission.	
	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
	Column 6 lines 48-50.	These signals instruct microcomputer, 205, ...  This base band signal is then transmitted through separate paths to three separate detector devices.	Page 24 lines 5-6.  Page 34 line 35 to page 35 line 1.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  This base band signal is then transferred through separate paths to three separate detector devices.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
generating a local graphic based on said stored selected data;	Column 19 line 67 to column 20 line 1.  Column 19 lines 39-41.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  [Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
outputting to a monitor the generated local graphic based on said step of detecting to present	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a visual display on the monitor including the local graphic.			<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	Page 26 lines 4-11.	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
		<p>Column 6 lines 48-50.</p> <p>Column 19 line 67 to column 20 line 1.</p>	<p>This base band signal is then transmitted through separate paths to three separate detector devices.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 34 line 35 to page 35 line 1.</p> <p>Page 26 lines 8-11.</p>	<p>This base band signal is then transferred through separate paths to three separate detector devices.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>
97. A method at a receiver station of coordinating the processing of		Column 19 lines 31-34.	<p>FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>	<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
data to present a local output, said method comprising the steps of:		See Fig. 6C.		See Fig. 7C.	<p>process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
storing identification information identifying data of interest to the user;		Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	<p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.</p>
receiving a plurality of information channels, at least one of said channels containing data;		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	<p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p>
scanning each of said plurality of information channels;		Column 18 lines 58-59.	Signal processor, 200, scans sequentially all channels.	Page 422 lines 23-25.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
step of comparing;			illustration, to microcomputer, 205.		determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
tuning to the identified channel;	Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...		Page 423 lines 11-13.  Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...  Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmit particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.
detecting the data of interest received on the identified channel;	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.		Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	information of interest in the fashion in which remote news-service-A station transmitted the A T & T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
storing said detected data of interest;		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
receiving at least one information transmission containing television programming and a control signal;		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week"



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	Reference	Language	Reference	Language
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	program, to display the video image of said information, and to emit sound in accordance with said audio ...  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
detecting the control signal in the at least one information transmission;	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
			Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening. ...
			Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal

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		Reference	Language	Reference	Language
			These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
generating a local graphic based on said stored selected data;	Column 19 line 67 to column 20 line 1.  Column 19 lines 39-41.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  [Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	
outputting to a display device at the receiver station the generated local graphic based on said step of detecting.	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber	

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		Reference	Language	Reference	Language
		Column 6 lines 48-50.	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>This base band signal is then transmitted through separate paths to three separate detector devices.</p>	<p>Page 26 lines 4-11.</p> <p>Page 34 line 35 to page 35 line 1.</p>	<p>station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>
98.	A method at a receiver station of coordinating the processing of	Column 19 lines 31-34.	<p>FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>	<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>data and</p> <p>television programming to present a local output, said method comprising the steps of:</p>	<p>Column 19 lines 37-39.</p> <p>Column 19 lines 60 to page 20 line 2.</p>	<p>[Microcomputer, 205,] may receive these directly or it may automatically query a data service for them in a predetermined fashion.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his</p>	<p>Page 449 lines 26-35.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			own stocks' performance overlay the studio generated graphic.		preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
				Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
				Page 451 line 3.	And the Fig. 1C combining is displayed.
selecting a datum of interest, said step of selecting comprising:		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
(a) storing an identification signal at the receiver station identifying the datum of interest;	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
(b) querying a remote data source;	Column 19 lines 37-39.	[Microcomputer, 205,] may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
(c) receiving, in response to said step of querying, a plurality of	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
data including the datum of interest from the remote data source, each of said plurality of data			stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
comprising an identification signal and	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.		Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and

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	Reference	Language	Reference	Language
an information signal;	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	<p>subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular AT&amp;T news item in a particular Transmit-AT&amp;T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code"</p> <p>information of said AT&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p>
(d) selecting the datum of interest from the plurality of received data;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p>
storing the selected datum of interest;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
receiving a plurality of units of television programming at the receiver station;	Column 9 lines 47-57.	<p>The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Page 248 line 17 to page 249 line 5.</p> <p>Page 257 line 24 to page 258 line 19.</p> <p>Page 257 line 24 to page 258 line 19.</p>	<p>apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically</p>

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	Reference	Language	Reference	Language
				<p>oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p>
			<p>Page 265 line 27 to Page 266 line 21.</p>	
		<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 250 lines 13-17.</p>	
			<p>Page 251 lines 8-11.</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Reference	Language
	<p>Column 19 lines 18-20.</p> <p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p>
		<p>... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
selecting one of the received plurality of units of television programming;	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 436 line 9 to page 437 line 6.	<p>a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
outputting the selected unit of television programming on an output device at the receiver station;				Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	outputting the selected unit of television programming on an output device at the receiver station;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
receiving a plurality of control signals;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>video screen of TV monitor, 202M.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...		

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification.	Reference	Language
	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, ...</p>		
generating a local display based on at least the information signal of the stored datum of interest;	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...		

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	<p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular AT&amp;T news item in a particular Transmit-AT&amp;T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p>
	Column 19 lines 35-37.	Each weekday; microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>
	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
outputting the local display to the output device to present the local output comprising the outputted unit of television programming and the outputted local display,	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  ... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
at least one of said steps of generating and outputting the user specific display being performed in response to at least one of	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus	Page 451 line 3.  Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus

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	Reference	Language	Reference	Language
said received plurality of control signals.	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 26 lines 4-11.	... Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed.
			Page 451 line 3.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 25 line 33 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	<p>Page 26 line 4.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>	<p>Said signal instructs microcomputer, 205, ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example</p>
		These signals instruct microcomputer, 205, to generate several graphic video overlays,	Page 451 lines 7-11.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to	Page 19 line 29 to page 20 line 20.	<p>instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p>
	transmit these overlays to TV set, 202,		Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	upon command.		Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				loading and running information for a particular combining.)
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99. A method of providing data of interest to a receiver station from a remote data source,	Column 15 lines 20-25.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 311 line 33 to page 312 line 8.	And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information. And for example, the transmitted programming ...
			Page 293 lines 32-35.	At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....
			Page 301 lines 6-9.	... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...
			Page 308 line 35 to page 309 line 3.	At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...
said data of interest for use at the receiver station in one of generating and outputting at least one receiver specific datum, said method comprising the steps of:	Column 14 lines 46-54.	The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,	Page 299 lines 13-25.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Language
	<p>in this case, is not located in the channel transmission.</p> <p>They may be preprogrammed into the signal processor (for example,</p> <p>in programmable random access memory controller, 20, in Fig. 1)</p> <p>or they may be transmitted in a channel other than the channel being transferred from box, 114.</p>	<p>Page 298 line 34 to page 299 line 1.</p> <p>Page 299 lines 13-17.</p> <p>Page 298 line 33 to page 299 line 1.</p> <p>Page 293 line 20.</p> <p>Page 291 lines 10-20.</p> <p>Page 289 lines 25-27.</p> <p>Page 290 lines 28-29.</p>	<p>output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, ...</p> <p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...</p> <p>Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, ...</p> <p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...</p> <p>...such as, for example, the RAM of controller, 20; ...</p> <p>...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") ...</p> <p>... said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ...</p> <p>...particular master cable control channel (that may or may not be cable channel 13) from the</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
storing data at said remote data source;			Page 294 lines 28-35.	multi-channel cable system ...  Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...
	Column 15 lines 22-25.	... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 312 lines 6-8.	... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.
	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
		... can be reprogramed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission,

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
receiving at said remote data source a query from said receiver station;	Column 15 lines 22-25.	... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 312 lines 6-8.	<p>including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
				<p>... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing at least a portion of said transmitted data;	<p>Column 15 lines 22-25.</p> <p>Column 8 lines 58-62.</p>	<p>... and [signal processors, 100, 103, 106, 109, and 112, could] telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.</p> <p>Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.</p> <p>An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.</p>	<p>Page 312 lines 6-8.</p> <p>Page 59 lines 29-31.</p> <p>Page 290 lines 26-31.</p> <p>Page 291 lines 21-24.</p> <p>Page 402 lines 21-26.</p> <p>Page 403 lines 7-12.</p>	<p>... may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.</p> <p>... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p> <p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
transmitting from a second remote source to said receiver station a signal which controls said receiver station to	Column 15 lines 20-22.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion ...	Page 405 lines 20-29.	Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.  Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...
			Page 311 lines 26-28.	And for example, the transmitted programming may be processed through fewer than three steps of decryption or more than three.
			Page 311 line 33 to page 312 line 2.	And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating ...
			Page 293 lines 32-35.	At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion ...
			Page 301 lines 6-9.	... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...
			Page 308 line 35 to page 309 line 3.	At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 13 lines 17-20.	The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programing uninterrupted may be embedded in the programing or may be elsewhere.	Page 291 lines 9-24	<p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... <i>on the frequency of said master control channel</i>. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p> <p>particular <b>master cable control channel (that may or may not be cable channel 13)</b> from the multi-channel cable system</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to</p>
			Page 289 lines 22-27	
			Page 290 lines 28-29	
			Page 298 lines 17-21.	
			Page 299 lines 19-22.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
select and process an instruct signal	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	<p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>decryptor, 224, ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, ...</p>
	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	<p>Page 26 line 4.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p> <p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p>	<p>microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic</p>

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	Reference	Language	Reference	Language
at least one of communication and presentation of	Column 19 lines 43-44.	transmit these overlays to TV set, 202,	Page 26 lines 4-8.	overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
	Column 19 lines 20-29.	upon command.	Page 44 lines 14-17.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
			Page 436 line 9 to page 437 line 6.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
		Reference	Language
television programming.	being televised on channel X.		the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...
	Then, in a predetermined fashion, microcomputer, 205, may		Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
			Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.
			Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
			...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	instruct tuner, 214, to switch box, 201, to channel X		Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...
	and may instruct control system, 220, to turn video recorder, 217, on and record		...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			"Wall Street Week,"	Page 446 lines 18-23.	... ...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
			and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.	...and to tune monitor, 202M, in a predetermined fashion.
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
100. A method of communicating subscriber station information from a subscriber station to at least one remote data collection station, said method comprising the steps of:	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.		Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
				Page 273 lines 4-6.	The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
				Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
inputting a subscriber reaction at said	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed		Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters



Support to parent application filed November 3, 1981		Support to instant specification.	
Claim Language	Reference	Language	Reference
subscriber station;		to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
receiving at said subscriber station information that designates at least one of an instruct signal to process and an output to deliver in consequence of subscriber input;	Column 20 lines 27-37.	<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p> <p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p>
			<p>Page 471 line 26 to page 472 line 17.</p> <p>Page 476 line 34 to Page 477 line 8.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....  ... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	and instruct control means, 226, to activate printer, 221.	Page 472 lines 16-17.  Page 472 lines 27-32.	controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...  (At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145 and 203, ...
Processing an instruct signal which is	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567. ...		Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	
Reference	Reference	Reference	Language
effective to coordinate data processing	Column 20 lines 37-42.	<p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200,</p> <p>Page 477 lines 8-23.</p> <p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p>	<p>invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular <b>covert control</b> information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "<b>covert control</b>.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any</p>

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.	
		Reference	Language	Reference
			controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".  (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	
	Column 10 lines 40-45.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, ...  Coordinating Print and Video	Page 324 line 31-to page 325 line 2.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, ...
	Column 20 line 11.	Coordinating Print and Video	See generally page 469 line 1 to page 516 line 13. (Page 469 lines 1-2 quoted herein.)	Automating U. R. Stations ... Examples #9 and # 10 Continued Coordinating Computers, Television, and Print
with at least one of communication and presentation of television programming	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and  Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			first, ordered	Page 472 lines 23-27 with	transmits a particular second SPAM message that consists of ... meter-monitor information including ...  Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.  Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
			and, second, delivered.	Page 471 lines 14-16.  Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
101. The method of claim 100, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...		Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing a subscriber instruction to	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...		Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receive at least one of specific mass medium programs, data,	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Page 408 lines 31-34.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.	
	Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 95 lines 18-24.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	
	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 410 lines 10-11.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ... So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.	
			Page 449 lines 13-26.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...	
				Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
news items, and		Column 18 lines 52-55.	The news services preceed each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	(Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)  Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
computer control instructions; and		Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiving at least one of specific mass medium programs, data, news items, and computer control instructions		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p>	<p>preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p>
		Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	<p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 428 lines 21-26.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
102. The method of claim 100, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
storing	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.	
a subscriber instruction to	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
process or present at least one mass medium programs, data, news items, or	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".	
computer control instructions in a specific fashion; and	Column 20 lines 31-37.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Reference
Language	Language	Language	Language
		<p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.</p>	<p>consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of</p>
		<p>476 line 34 to page 477 line 8.</p>	<p>476 line 34 to page 477 line 8.</p>
		<p>Page 477 lines 8-17.</p>	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
presenting at least one of specific mass medium programs, data, news items, and computer control instructions in accordance with said instruction.	Column 20 lines 46-49.	first, ordered	Page 472 lines 23-27 with	transmits a particular second SPAM message that consists of ... meter-monitor information including ...
			Page 471 lines 14-16.	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 473 line 29 to Page 474 line 1.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
			Page 473 lines 3-13.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
			Page 477 lines 12-17.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...
			Page 477 lines 23-29.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
				... causes ... said decoder, 290, to detect and process properly the information of said

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				second message.  (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)  Receiving said output information causes printer, 221, to print the information of said specific recipe and list.	
103. The method of claim 100, wherein said information that designates one of an instruct signal to process and an output to deliver in consequence of subscriber input is detected in an information transmission from one of a data source and a programming source, said method further comprising the steps of:	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...	
programming a processor to respond to information communicated from said one of a data source and a	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26,	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
programming source;			apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.		uniquely, an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
receiving an information transmission from said one of a data source and a programming source;	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	<p>Figs. 2A-2C. Page 35 lines 1-6.</p> <p>Page 35 lines 16-18.</p> <p>Page 35 lines 27-30.</p> <p>Page 36 lines 1-3.</p> <p>Page 36 lines 18-20.</p> <p>Page 37 lines 26-28.</p> <p>Page 470 lines 1-3 and</p>	<p><i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.</p> <p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic</p>	
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201.			

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		Julia Childs's "The French Chef" is one such program.	Page 470 lines 9-12.  Page 470 lines 19-21.	Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
inputting at least a portion of said information transmission to a control signal detector;	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and  Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
detecting one of data and an instruct signal in said information transmission; and	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
passing said detected one of data and an instruct signal to said processor.	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 472 lines 4-12.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
104. A method of controlling a remote intermediate television transmitter station to communicate television program material	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 324 lines 18-21.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of			

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
to at least one receiver station,	Column 17 lines 47-53.	<p>television programming.</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>	Page 390 lines 30-35.	<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p>
said remote intermediate television transmitter station including one of a broadcast and a cablecast	Column 10 lines 15-20.	<p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.</p>	Page 396 lines 8-10.  Page 324 lines 8-17.	<p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.</p>
transmitter,	Column 10 lines 43-47.	<p>... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	Page 325 lines 1-4.	<p>... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>
a plurality of selective transfer devices each operatively connected to said one of a broadcast and a	Column 10 lines 41-43.	<p>... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...</p>	Page 324 line 34-35.	<p>... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
cablecast transmitter,  a receiver for receiving television programming   <					

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
and one of a controller and a computer capable of controlling		their associated programming and ...		63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
at least one of said plurality of selective transfer devices, and with said remote television transmitter station adapted to	Column 11 lines 15-17.  Column 11 lines 44-46.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.  Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 59 lines 29-33  Page 326 lines 19-20.  Page 328 lines 14-16.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  Cable program controller and computer, 73, is the central automatic control unit for the transmission station.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ....
detect the presence of at least one control signal,	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
and to deliver at said one of a broadcast and a cablecast transmitter said television programming, said method comprising the steps of:	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 34 line 35 to page 35 line 1.  Page 59 lines 29-33.	This base band signal is then transferred through separate paths to three separate detector devices.  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 30-31.	... transmit each program unit to cable field distribution system, 93.	Page 326 line 35 to page 327 line 2.  Page 328 line 13.	... each program unit, ... the station should transmit the unit, ...  ... transmit the programming of each received program unit.
	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the
receiving said television programming at said at least one origination transmitter station and				

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
delivering said television programming to at least one origination transmitter, said television programming to have at least	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 59 lines 29-33.</p> <p>image of said graphic as it appears on the video screen of TV monitor, 202M.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>	
one associated instruct signal which is	Column 19 lines 18-20.	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>Page 25 line 34 to page 26 line 1.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>Page 90 lines 4-7.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Page 435 lines 16-18.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>Page 267 lines 20-28 from example #5.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
effective at the at least one receiver station to coordinate data processing with	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 268 line 28 to page 269 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
			Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to





Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		upon command.	Page 44 lines 14-17.  Page 26 lines 20-28.	received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)  ... instruction signals embedded in the "Wall Street Week" programming transmission.  Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to
at least one of communication and presentation of said television programming;	Column 19 lines 43-44.  Column 19 lines 20-29.	... instruction signals embedded in the "Wall Street Week" programming transmission.  Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 21 lines 23-24.  Page 436 line 9 to page 437 line 6.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
		<p>Then, in a predetermined fashion, microcomputer, 205, may</p> <p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p> <p>and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p>	<p><i>view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217; to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiving at least one control signal which			and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	...and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.		Page 325 line 34 to page 326 line 11.  Page 326 lines 16-18.  Page 327 line 35 to page 328 line 13.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.  Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has
at the remote intermediate television transmitter station operates to control the communication of at least one of said television programming	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the			

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and said at least one instruct signal; and			programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.		been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
transmitting said at least one control signal from said at least one origination transmitter	Column 19 lines 60-63.		At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 84 lines 26-28.  Page 28 lines 26-27.  Page 49 lines 26-27.  Page 328 lines 14-16.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	<p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
before a specific time.		Column 11 lines 28-31.	Such input information might also indicate <b>when</b> and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate <b>when</b> and how the station should expect to receive each program unit, <b>when</b> and on which channel or channels and how the station should transmit the unit, ...
105. The method of claim 104, wherein said at least one control signal includes one of a code and		Column 2 lines 63-66.	(The term "signal unit" hereinafter means <b>one complete signal instruction</b> or information <b>message unit</b> . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means <b>one complete signal instruction</b> or information <b>message unit</b> . Examples of signal units are a unique code identifying a programming unit, or a ...
a datum which		Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
operates at the remote intermediate television transmitter station		Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
to identify said at least one of said television programming and said at least one instruct signal, said method further comprising the step of:		Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ....
				Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.
transmitting a schedule which	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 84 lines 26-28.  Page 28 lines 26-27.  Page 49 lines 26-27.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...  ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
operates at the remote intermediate television transmitter station to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>communicate said at least one of said television programming and said at least one instruct signal to said at least one origination transmitter at said specific time.</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
106. The method of claim 104, further comprising the step of embedding  a specific one of said at least one control signal in an information transmission containing said at least one of said television programming and said at least one instructing signal before transmitting said at least one of television programming and said at least one instruct signal to said remote intermediate television transmitter station.	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
				SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	
				... monitor information that identifies what programming is available, ...	
			Page 84 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information.	
			Page 28 lines 26-27.		
			Page 49 lines 26-27.		
107. The method of claim 104, wherein one of (i) said specific time	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>is a scheduled time of transmitting said at least one of television programming and said at least one instruct signal at said remote intermediate television transmitter station and</p> <p>(ii) said at least one control signal is effective at the remote intermediate television transmitter station to control at least one of said plurality of selective transfer devices at different times.</p>	<p>Column 11 lines 28-31.</p>	<p>program unit to cable field distribution system, 93.</p>	<p>Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.</p>	<p>Page 326 line 33 to page 327 line 2.</p>	<p>channels and how the station should transmit the unit, ...</p> <p>Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...</p>
<p>108. A method of controlling a receiver station including the steps of:</p>	<p>Column 10 line 64 to column 11 line 3.</p>	<p>At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.</p>	<p>Page 325 lines 17-27.</p>	<p>In line between each of the aforementioned receiver/ demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well</p>	<p>Page 324 line 31 to page 325 line 2.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
detecting one of the presence and	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, ...
absence of	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
one of a broadcast and a cablecast	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
control signal;	Column 8 lines 58-60.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 290 lines 26-31.	... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
inputting an instruct-to-react signal to a processor			Page 291 lines 21-24.	decoder, 30; ...  In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...
			Page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Column 8 lines 27-29.	The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.	Page 248 line 35 to page 249 line 5.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
based on said step of detecting one of the presence and absence of a control signal;	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 251 lines 3-8.	Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.
			Page 253 lines 10-11.	Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...
			Page 253 lines 19-22.	Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.
	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail	Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30,

Support to parent application filed November 3, 1981		Support to instant specification	
Claim Language	Reference	Language	Reference
		to appear.	
controlling said processor to output specific information in response to said step of inputting an instruct-to-react signal; and	Column 9 lines 53-57.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 265 line 27 to Page 266 line 21.</p>
		<p>controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
coordinating data processing	Column 19 lines 45-53.	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 250 lines 13-17.  251 lines 8-11.  Page 263 lines 19-24.         Page 37 lines 26-28.	radio frequency selection pattern: 100.0 MHz.  Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.  Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...  ... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
			and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	These signals instruct microcomputer, 205,	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
	to generate several graphic video overlays,	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to	Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Language
		<p>transmit these overlays to TV set, 202,</p> <p>upon command.</p> <p>... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p> <p>Column 20 lines 33-36.</p>	<p>for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p>
	<p>transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 476 line 34 to page 477 line 8.</p>	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
with communication or presentation of television programming on the basis of information received from said processor based on said step of controlling a processor.	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Then, in a predetermined fashion, microcomputer, 205, may	Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
				Page 436 line 9 to page 437 line 6.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 439 lines 9-15.	on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ... ...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ... ...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ... ...and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	instruct tuner, 214, to switch box, 201, to channel X		Page 295 lines 6-8.	
	and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"		Page 445 lines 24-27.	
	and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on		Page 446 lines 18-23.	
	and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	
			Page 445 line 35 to page 446 line 1.	
			Page 446 lines 17-21.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
109. The method of claim 108, wherein a buffer is operatively connected to said processor for buffering input, said method further comprising the step of:	Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.	Page 32 lines 16-20.	
	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.	Page 33 lines 7-12.	
				Page 156 line 33 to page 157 line 10.	Fig. 3A shows one such preferred controller, 39. One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series. Buffer, 39A, and processor, 39B, are the first buffer and processor of the series and perform the forward error correcting functions of controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. Buffer, 39E, and control processor, 39J, are the third buffer and processor. All controlled functions invoked at controller, 39, by received SPAM signals are invoked at control processor, 39J.
				Page 157 line 34 to page 158 line 1.	As Fig. 3A shows, each processor, 39B, 39D, and 39J, has associated RAM and ROM and, hence, constitutes a programmable controller in its own right.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
bypassing said buffer and inputting said instruct-to-react signal directly to said processor.	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 251 lines 3-8.	Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.
	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 253 lines 10-11.  Page 253 lines 19-22.	Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...  Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.
			Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
			Page 254 line 23 to page 255 line 3.	... information and transmit it to digital detector, 34; causing digital detector, 34, to detect the binary information of said signal information and transfer said binary information to controller, 39. Receiving said binary information at controller, 39, causes the binary SPAM information of the wireless channel 5 transmission to be checked and corrected, as necessary, at processor, 39B; converted into locally usable binary information at processor, 39D; and checked for end of file signal information at EOFS

Claim Language	Support to parent application filed November 3, 1981. Reference	Support to instant specification. Reference	Support to instant specification. Language
		<p>Page 259 lines 3-29.</p>	<p>valve, 39F, and transmitted to the null output of matrix switch, 39I, until EOFs valve, 39F, detects an end of file signal. In due course, said EOFs valve, 39F, receives the aforementioned end of file signal causing said valve, 39F, to detect said signal and transmit the aforementioned interrupt signal of EOFs-signal-detected information to said control processor, 39J. Receiving said EOFs-signal-detected ...</p> <p>In due course said remote wireless station transmits the end of file signal that terminates said information segment, and the EOFs valve, 39F, of decoder, 30, receives and detects said signal, in its end of file detecting fashion, causing said valve, 39F, to transmit the aforementioned EOFs-signal-detected information to said control processor, 39J. Just as applied in the case of the 2nd command (#5), receiving said EOFs-signal-detected information causes control processor, 39J, to cause EOFs valve, 39F, to discard all information of said end of file signal; to cause said matrix switch, 39I, to cease transferring SPAM message information from said EOFs valve, 39F, to its null output information and commence transferring SPAM message information from said valve, 39F, to said control processor, 39J; then to cause EOFs valve, 39F, to recommence processing inputted signal words in its preprogrammed fashion and transferring said words to matrix switch, 39I; and to commence waiting to receive from said switch, 39I, the binary information of a subsequent SPAM header.</p> <p>Subsequently, said remote wireless station transmits the second combining synchronizing command of the "Wall Street Week" program. (Hereinafter, said command may be called the "3<sup>rd</sup> command (#5).")</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
110. The method of claim 108, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.  Determining a match causes	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a tuner to tune a receiver to receive the television channel or television program designated by said processed datum.		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 439 lines 14-15.  Page 445 line 24 to page 446 line 1.	microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.  ... to receive the transmission of cable channel 13; ...  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
		Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 446 lines 17-21.    Page 437 lines 1-6.    Page 439 lines 9-15.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 295 lines 6-8.  Page 439 lines 9-15.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...  ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;  ...
111. The method of claim 108, wherein said processor processes a datum designating at least one specific channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.  Page 436 line 9 to page 437 line 3.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<p>multichannel cable signal and a multichannel broadcast signal, said method further comprising the step of</p> <p>controlling a tuner to tune a converter to receive the at least one specific channel designated by said processed datum.</p>	<p>Column 6 lines 23-26.</p>	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p>	<p>Page 439 lines 14-15.</p>	<p>information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
	<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p>	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
			<p>Page 446 lines 17-21.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...		Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 439 lines 9-15.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 295 lines 6-8.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 439 lines 9-15.	
112. A method of controlling	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			Page 451 line 3.	And the Fig. 1C combining is displayed.
a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
a processor for	Column 6 lines 23-26.	A signal processor apparatus for	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
passing and		Column 7 lines 47-49.	simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 30 lines 29-30.	processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
executing instructions and		Column 7 lines 50-58.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 31 lines 10-18.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:		Column 7 lines 60-64.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 26-29.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
receiving one of a broadcast and a cablecast transmission;		Column 6 lines 30-41.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 29 lines 15-26.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
			The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled		The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>demodulating said one of a broadcast and a cablecast transmission to detect an information transmission thereon,</p> <p>said information transmission comprising an instruct signal</p> <p>which is effective to coordinate data processing</p>	<p>Column 6 lines 45-48.</p> <p>Column 19 line 64 to column 20 line 2.</p>	<p>oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p> <p>The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.</p> <p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p> <p>The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.</p> <p>... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>	<p>Page 34 lines 31-35.</p> <p>Page 26 lines 4-11.</p>	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week"</i></p>
	<p>Column 19 lines 20-29.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 451 line 3.</p> <p>Page 436 line 9 to page 437 line 6.</p>		

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p><i>program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p>
		Then, in a predetermined fashion, microcomputer, 205, may	Page 439 lines 9-15.	
		instruct tuner, 214, to switch box, 201, to channel X	Page 295 lines 6-8.	
		and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week."	Page 445 lines 24-27.	
		and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 446 lines 18-23.	
			Page 445 line 24 to page 446 line 1.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
with at least one of communication and presentation of television programming;			and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	...and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		Column 19 lines 43-44.  Column 19 lines 20-29.	... instruction signals embedded in the "Wall Street Week" programming transmission.  Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 21 lines 23-24.  Page 436 line 9 to page 437 line 6.	... instruction signals embedded in the "Wall Street Week" programming transmission.  Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.  Receiving said please-fully-enable-WSW-
			Then, in a predetermined fashion, microcomputer, 205, may		

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
detecting said instruct signal on said	Column 6 lines 48-50.	<p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p> <p>and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p> <p>and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 34 line 35 to page 35 line 1.</p>	<p>This base band signal is then transferred through separate paths to three separate</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
information transmission and passing said instruct signal to said processor;		Column 7 lines 6-11.	detector devices.  If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.  Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 29 line 33 to page 30 line 5.  Page 30 lines 29-30.	detector devices.  Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.  Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
delaying, under processor control, the passing of said instruct signal to a controllable apparatus;		Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
passing said instruct signal to said controllable apparatus		Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
on the basis of said timing signal; and		Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		signals to pass externally and <b>when</b> and where and how to determine which signals to pass to buffer/comparator, 14.	<p>Page 149 lines 8-15.</p> <p>processor and ...</p> <p>Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction of key particular decryption mark information of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, <i>to execute particular preprogrammed transfer- and-meter instructions</i> ...</p> <p>Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message <i>under control of said transfer-and-meter instructions</i> commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence <i>executing the meter instructions of said transfer-and-meter instructions</i>. Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p> <p>Controller, 20, has capacity for ... all</p>	<p>Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, <i>to execute particular preprogrammed transfer- and-meter instructions</i> ...</p> <p>Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message <i>under control of said transfer-and-meter instructions</i> commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence <i>executing the meter instructions of said transfer-and-meter instructions</i>. Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p> <p>Controller, 20, has capacity for ... all</p>
	Column 8 lines 56-58.	To facilitate the operation of the device, the	<p>For example, page 150 lines 29-35.</p> <p>For example, page 152 line 19 to page 153 line 1.</p> <p>Page 33 lines 18-21.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		See Fig. 1.	controller, 20, can receive information from all operating elements of the apparatus.	See Fig. 2.	elements of the signal processor and can receive operating information from said elements.
controlling said controllable apparatus based on said instruct signal.	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 26 lines 4-11.  Page 451 line 3.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
113. A method of controlling at least	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
one of a plurality of receiver stations each of which		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
includes one of a broadcast and a cablecast mass medium programming receiver,		Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
at least one output device,		Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 29 lines 4-15.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
a control signal		Column 6 lines 50-53.	These separate detectors are designed to act	Page 470 lines 1-3 and  Page 470 lines 9-12.  Page 470 lines 19-21.  Page 35 lines 1-4.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.  The apparatus of these separate paths are

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
<p>detector,</p> <p>at least one processor capable of responding to an instruct signal,</p> <p>and with each said at least one of said plurality of receiver stations adapted to detect and respond to at least one instruct signal, said method comprising the steps of:</p>	<p>Column 20 lines 31-33.</p> <p>Column 6 lines 48-50.</p> <p>Column 7 lines 50-54.</p>	<p>on the particular frequency ranges in which the encoded information may be found.</p> <p>... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...</p> <p>This base band signal is then transmitted through separate paths to three separate detector devices.</p> <p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.</p>	<p>designed to act on the particular frequency ranges in which embedded signal information may be found.</p> <p>... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.</p>
<p>receiving at one of a broadcast and a cablecast transmitter station an instruct signal which is effective at said at least one of said plurality of receiver stations to</p>	<p>Column 10 lines 30-39.</p>	<p>The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>
<p>coordinate data processing with at least one of communication and presentation of television programming</p>	<p>Column 4 lines 5-6.</p> <p>Column 20 lines 12-15.</p>	<p>These techniques employ signals embedded in programs.</p> <p>FIG 6D illustrates one method for coordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.</p>	<p>The present invention employs signals embedded in programming.</p> <p>Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input,</p>

Support to parent application filed November 3, 1981		Support to instant specification.	
Claim Language	Reference	Language	Reference
		225. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)  In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular <b>covert control</b> information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...  By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " <b>covert control</b> .")  ... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...	Page 478 lines 1-5.  Page 477 lines 8-23.  Page 281 lines 1-6.  Page 282 line 2 to page 283 line 33.
	Column 20 lines 37-42.  The signal transmission from processor, 204, also passes a signal word to signal processor, 200,		
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
and delivering the instruct signal to a transmitter;	Column 20 lines 19-23.	<p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p> <p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."</p>	<p>Page 478 lines 1-5.</p> <p>Page 471 lines 6-13.</p>	<p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>
	Column 10 lines 40-47.	<p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	Page 324 line 31 to page 325 line 4.	
	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
communicate the instruct signal to a specific processor; and		Column 4 lines 5-6.	<p>Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p> <p>These techniques employ signals embedded in programs.</p>	<p>received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p> <p>The present invention employs signals embedded in programming.</p>	
transferring said at least one control signal to the transmitter, said transmitter transmitting		Column 10 lines 40-47.	<p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	<p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	
the instruct signal and the		Column 20 lines 27-37.	<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567#</p>	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		<p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form</p>	<p>Page 476 line 34 to Page 477 line 8.</p>	<p>information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p>
			<p>Page 477 lines 8-17.</p>	<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p>
		<p>and instruct control means, 226, to activate printer, 221.</p>	<p>Page 474 lines 3-7.</p>	<p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p>
<p>at least one control signal.</p>	<p>Column 20 lines 27-32.</p>	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal</p>	<p>Page 471 line 26 to page 472 line 17.</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...		and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
114. The method of claim 113, wherein one of said instruct signal	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...		Page 59 lines 29-33.  Page 25 lines 34-35.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, ...  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
and identification data in respect of said instruct signal	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language	Language	Language

is embedded one of in a television signal and in a signal containing a television program.	<p>Column 4 lines 5-6.</p> <p>Column 19 lines 62-63</p>	<p>These techniques employ signals embedded in programs.</p> <p>... and [the instruction signal] is transmitted in the programming transmission.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 13 lines 25-26.</p> <p>Page 25 line 34 to page 26 line 1.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>The present invention employs signals embedded in programming.</p> <p>... an instruction signal is ... embedded in the programming transmission, and transmitted.</p>
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<p>115. The method of claim 113, wherein a switch communicates signals selectively from a receiver and one of a memory and a recorder to a transmitter, said method further comprising the step of:</p> <p>detecting a first signal which is effective at the transmitter station to</p>	<p>Column 11 lines 38-46.</p>	<p>Matrix Switch, 75, in Fig. 3B.</p> <p>TV receiver, 53, in Fig. 3A.</p> <p>VTR, 78, in Fig. 3B.</p> <p>Recorder and Player, 76, in Fig. 3B.</p> <p>Cable Channel Modulator, 83, in Fig. 3C.</p>	<p>Matrix Switch, 75, in Fig. 6A.</p> <p>TV receiver, 53, in Fig. 6A.</p> <p>78, in Fig. 6A.</p> <p>recorder/players, 76 and 78</p> <p>Recorder and Player, 76, in Fig. 6A.</p> <p>Cable Channel Modulator, 83, in Fig. 6B.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,</p>
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Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>when and on what channel or channels the head end facility should transmit the programming.</p> <p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>		<p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...</p> <p>In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
instruct communication.	Column 11 lines 54-57.	<p>∴ controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 lines 14-16.</p> <p>Page 328 line 31 to page 329 line 1.</p>	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
116. The method of claim 113, wherein a controller controls a switch to communicate to said transmitter one of a selected mass medium program and a control signal, said method further comprising the step of:	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
a control signal, said method further comprising the step of:	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
detecting a signal which is effective at the transmitter station to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
	Reference	Reference	Language
control said switch;	Column 11 lines 50-57.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
controlling said switch to communicate one or more instruct signals	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the</p>	<p>For example; computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Language
<p>according to a transmission schedule;</p>	<p>Column 11 lines 38-43.</p>	<p>field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming</p>
		<p>Page 327 line 35 to page 328 line 13.</p>	
	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 84 lines 26-28.</p>	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
		transmissions....	<p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	
controlling said switch to communicate a signal from a specific one	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
of a plurality of instruct signal sources; and	Column 19 lines 43-44.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>	Page 21 lines 23-24.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
controlling said switch to communicate an instruct signal to a selected one of	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that</p>	Page 328 line 22 to page 329 line 1.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of</p>



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
a plurality of transmitters.			leads to modulator, 87.		programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		Column 19 lines 43-44.  Column 10 lines 43-47.	... instruction signals embedded in the "Wall Street Week" programming transmission.  ... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 21 lines 23-24.  Page 325 lines 1-4.	... instruction signals embedded in the "Wall Street Week" programming transmission.  ... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
117. The method of claim 113, further comprising the step of: transmitting to		Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
a receiver station		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.  Page 396 lines 8-10.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
at least one datum that one of	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p>
(i) designates one of	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>The present invention employs signals embedded in programming.</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
a time and a channel of transmission of said instruct signal and (ii) identifies one of the title of and	Column 19 lines 20-23.	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>
		<p>Page 267 lines 20-28 from example #5.</p>
		<p>Page 435 lines 16-25.</p>
		<p>Page 436 line 9 to page 437 line 3.</p>

All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)

In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...

Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.

Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.

Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>subject matter contained in a mass medium program associated with said instruct signal.</p>	<p>Column 18 lines 52-55.</p>	<p>The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.</p>	<p>Page 439 lines 14-15.  Page 420 line 32 to page 421 line 17.</p>	<p>information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.  ...to receive the transmission of cable channel 13;...</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&amp;T news item in a particular Transmit-AT&amp;T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p>
<p>118. The method of claim 108, wherein said processor processes a datum designating one</p>	<p>Column 19 lines 17-23.</p>	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator,</p>	<p>Page 435 lines 16-18.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p>

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Language
of a television channel and a television program, said method further comprising the step of		14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a selective transmission device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	channel 13; ... ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
	a control signal detector at least a portion of said one of a television channel and a television program designated by said processed datum.	Column 19 lines 45-49.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ... This base band signal is then transferred through separate paths to three separate detector devices.	Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
				Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
				Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
119. The method of claim 108, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.  Page 436 line 9 to page 437 line 3.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205,</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a control signal detector to search for at least one control signal in the one of a television channel and a television program designated by said processed datum.	Column 17 lines 28-33.	... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)		Page 439 lines 14-15.	contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.
				Page 318 lines 2-7.	... to receive the transmission of cable channel 13; ...  By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
120. The method of claim 108, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
controlling a selective transmission device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p> <p>Page 445 line 24 to page 446 line 1.</p>	<p>described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a computer control signals detected in the one of a television channel and a television program designated by said processed datum.	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 446 lines 17-21.	said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 451 lines 6-7.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Page 37 line 26 to page 38 line 8.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
	Column 6 lines 48-50.	This base band signal is then transmitted	Page 24 lines 5-6.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 451 lines 7-9.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
			Page 34 line 35 to page	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
				This base band signal is then transferred

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language

		through separate paths to three separate detector devices.	35 line 1.	through separate paths to three separate detector devices.
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121. The method of claim 108, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
controlling a computer to respond to control signals detected in the one of a television channel and a television program designated by said processed datum.	<p>Column 19 lines 42-44.</p> <p>Column 19 lines 46-53.</p>	<p>Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Page 439 lines 14-15.</p> <p>Page 21 lines 20-24.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	Page 26 lines 4-11.	<p>to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
<p>122. The method of claim 108, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of</p>	Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controlling a television monitor to display one of video and audio contained in the television channel or television program designated by said processed datum.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		contain said particular specific-WSW information and said ... enable-WSW-on-CC13...
			Page 439 lines 14-15.	Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
			Page 445 line 24 to page 446 line 1.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.  ... to receive the transmission of cable channel 13; ...  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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123. The method of claim 108, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
			Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controlling a storage device to process one of video and audio contained in the one of a television channel and television program designated by said processed datum.	Column 19 lines 23-27.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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124. The method of claim 108, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
			Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controlling a selective transmission device to communicate to one of a storage device and a television monitor one of the television channel and the television program designated by said processed datum.	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			<p>particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>	
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125. The method of claim 108, wherein said processor processes a datum designating at least one specific channel of one of a	Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p>
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Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Reference	Language
		Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.
		... to receive the transmission of cable channel 13; ...
multichannel cable signal and a multichannel broadcast signal, said method further comprising the step of	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
	Column 6 lines 23-26.	Page 439 lines 14-15.
controlling a selective transmission device to input to	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 19 lines 27-29.	Page 445 line 24 to page 446 line 1.
		Page 446 lines 17-21.
		In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a control signal detector at least some portion of the one or	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 37 line 26 to page 38 line 8.  Page 24 lines 5-6.  Page 451 lines 7-9.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...  This base band signal is then transferred through separate paths to three separate detector devices.	
more specific channels designated by said processed datum.	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for	Page 419 line 34 to page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		programming of interest to play or record.	Page 11 lines 5-10.	information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
126. The method of claim 108, wherein said processor processes a datum designating at least one specific channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.  Page 436 line 9 to page 437 line 3.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>multichannel cable signal and a multichannel broadcast signal, said method further comprising the step of</p> <p>controlling a control signal detector to search for one or more control signals in the one or</p>	Column 6 lines 23-26.	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p> <p>... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)</p> <p>In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.</p>	<p>contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...</p> <p>Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.</p>	<p>Page 439 lines 14-15.</p> <p>Page 29 lines 4-7.</p> <p>Page 318 lines 2-7.</p> <p>Page 419 line 34 to page 420 line 2.</p> <p>Page 11 lines 5-10.</p>	<p>The present invention consists of an integrated</p>
	Column 17 lines 28-33.				
	Column 19 lines 1-4.				



Claim Language	Support to parent application filed November 3, 1981.	
	Reference	Language
	Support to instant specification.	
	Reference	Language

			system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
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127. The method of claim 108, wherein said processor processes a datum designating at least one specific channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to</i></p>
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Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
<p>multichannel cable signal and a multichannel broadcast signal, said method further comprising the step of</p> <p>controlling a selective transmission to</p> <p>input to a computer</p>	Column 6 lines 23-26.	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p> <p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 439 lines 14-15.</p> <p>Page 29 lines 4-7.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>... instruction signals embedded in the "Wall Street Week" programming</p>	
	Column 19 lines 27-29.				
	Column 19 lines 43-49.	... instruction signals embedded in the	Page 21 lines 23-24.		

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
control signals detected in the one or			<p>"Wall Street Week" programing transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
	more specific channels designated by said processed datum.	Column 19 lines 1-4.	<p>These signals instruct microcomputer, 205, ...</p> <p>In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 419 line 34 to page 420 line 2.</p> <p>Page 11 lines 5-10.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.</p> <p>The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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128. The method of claim 108, wherein said processor processes a datum designating at least one specific channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
multichannel cable signal and a multichannel broadcast signal, said method further comprising the step of	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 439 lines 14-15.  Page 29 lines 4-7.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.  ... to receive the transmission of cable channel 13; ...  Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
controlling a computer to respond to control signals detected in the one or	Column 19 lines 42-44.  Column 19 lines 46-53.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 21 lines 20-24.  Page 23 line 35 to page 24 line 16.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>"program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
more specific channels designated by said processed datum.					art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
		Column 19 lines 1-4.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
129. The method of claim 108, wherein said processor processes a datum designating at	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator,	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
least one specific channel of one of a		<p>14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable</p>



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
multichannel cable signal and a multichannel broadcast signal, said method further comprising the step of controlling a television monitor to display video or audio contained in the one or	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.  ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	channel 13; ...  Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	Page 29 lines 4-7.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	more specific channels designated by said processed datum.			Column 19 lines 1-4.	
				Page 11 lines 5-10.	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
130. The method of claim 108, wherein said processor processes a datum designating at least one specific channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>
		<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes</p>	



Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Reference	Reference
Language	Language	Language

<p>more specific channels designated by said processed datum.</p>	<p>Column 19 lines 1-4.</p>	<p>In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.</p>	<p>Page 446 lines 18-23.</p> <p>Page 419 line 34 to page 420 line 2.</p> <p>Page 11 lines 5-10.</p>	<p>switch power on to video recorder/player, 217,....</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.</p> <p>The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.</p>
<p>131. The method of claim 108, wherein said processor processes a datum designating at least one specific channel of one of a</p>	<p>Column 19 lines 17-23.</p>	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio- program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			page 437 line 3.	<p>message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
multichannel cable signal and a multichannel broadcast signal, said method further comprising the step of	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 439 lines 14-15.  Page 29 lines 4-7.	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p>
controlling a selective transmission device to communicate to a storage device or an output device the one or	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer,	Page 437 lines 1-6.	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
more specific channels designated by said processed datum.		Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	with said audio ...  Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
132. The method of claim 113, wherein a switch communicates signals selectively from a receiver and one of a memory and a recorder to a transmitter, said method further comprising the step of determining a specific signal source from which to communicate a second signal to said transmitter.		Column 11 lines 50-54.	Matrix Switch, 75, in Fig. 3B.  TV receiver, 53, in Fig. 3A. VTR, 78, in Fig. 3B. Recorder and Player, 76, in Fig. 3B. Cable Channel Modulator, 83, in Fig. 3C.  For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Matrix Switch, 75, in Fig. 6A.  TV receiver, 53, in Fig. 6A. 78, in Fig. 6A. recorder/players, 76 and 78 Recorder and Player, 76, in Fig. 6A. Cable Channel Modulator, 83, in Fig. 6B.  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
133. The method of claim 113, wherein a switch communicates signals selectively from a receiver and one of a memory and a recorder to a transmitter, said method further comprising the step of controlling said switch to communicate a second signal to said transmitter	Column 11 lines 54-57.	Matrix Switch, 75, in Fig. 3B.  TV receiver, 53, in Fig. 3A.  VTR, 78, in Fig. 3B.  Recorder and Player, 76, in Fig. 3B.  Cable Channel Modulator, 83, in Fig. 3C.  ... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 324, line 35.  Page 328 line 31 to page 329 line 1.  Page 327 line 35 to page 328 line 13.	Matrix Switch, 75, in Fig. 6A.  TV receiver, 53, in Fig. 6A.  78, in Fig. 6A. recorder/players, 76 and 78  Recorder and Player, 76, in Fig. 6A.  Cable Channel Modulator, 83, in Fig. 6B.  In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
in response to a first signal which is effective at the transmitter station to instruct communication.	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.



Claim Language	Support to parent application filed November 3, 1981	
	Reference	Language
Support to instant specification.		Language
Reference		Language

	matrix switch, 75, and video recorder/players, 76 and 78.		By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
		Page 84 lines 26-28.	
		Page 28 lines 26-27.	
		Page 49 lines 26-27.	
		Page 328 lines 14-16.	

134. The method of claim 113, wherein a switch communicates signals selectively from a receiver and one of a memory and a recorder to a transmitter, said method further	Matrix Switch, 75, in Fig. 3B.  TV receiver ,53, in Fig. 3A. VTR, 78, in Fig. 3B.  Recorder and Player, 76, in Fig. 3B.  Cable Channel Modulator, 83, in Fig. 3C.		Matrix Switch, 75, in Fig. 6A.  TV receiver ,53, in Fig. 6A. 78, in Fig. 6A. recorder/players, 76 and 78  Recorder and Player, 76, in Fig. 6A.  Cable Channel Modulator, 83, in Fig. 6B.
		Page 324, line 35.	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
comprising the step of controlling said switch to communicate a second signal from		Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	said selected signal source.	Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
135. The method of claim 113, wherein a switch communicates signals selectively from a receiver and one of a memory and a recorder to a transmitter, said method further comprising the step of controlling said switch			Matrix Switch, 75, in Fig. 3B.		Matrix Switch, 75, in Fig. 6A.
			TV receiver, 53, in Fig. 3A. VTR, 78, in Fig. 3B.	Page 324, line 35.	TV receiver, 53, in Fig. 6A. 78, in Fig. 6A. recorder/players, 76 and 78 Recorder and Player, 76, in Fig. 6A.
			Cable Channel Modulator, 83, in Fig. 3C.		Cable Channel Modulator, 83, in Fig. 6B.
		Column 11 lines 61-64.	... in a predetermined fashion, to record the	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
to communicate to said one of a memory and a recorder a first signal			incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...		record programming, and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
which is effective at the receiver station to instruct.		Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 472 lines 13-15.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...
136. The method of claim 113, wherein a controller controls a switch to communicate to said transmitter one of a selected mass medium program and		Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
a control signal, said method further comprising the step of		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
inputting to said controller a signal which is effective to		Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
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control said switch.	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 84 lines 26-28.	<p>predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
			Page 28 lines 26-27.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
			Page 49 lines 26-27.	
			Page 328 line 22 to page 329 line 1.	

137. The method of claim 113, wherein a	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch,
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controller controls a switch to communicate to said transmitter one of a selected mass medium program and			transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
a control signal, said method further comprising the step of	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.		Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
controlling said switch to communicate	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
at least one instruct signal	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.		Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
according to a transmission schedule.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the		Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.	
		Reference	Language	Reference
	head end facility should transmit the programming.		determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.	
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
138. The method of claim 113, wherein a controller controls a switch to communicate to said transmitter one of a selected mass medium program and a control signal, said method further comprising the step of controlling said switch		Column 11 lines 54-57.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
		Column 11 lines 50-57.	... if controller/computer, 73, determines	For example, computer, 73, receives a given

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
to communicate a signal from a specific one of			that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	page 329 line 1.	SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	a plurality of instruct signal sources.	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
139. The method of claim 113, wherein a controller controls a switch to communicate to said transmitter one of a selected mass medium program and	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a control signal, said method further comprising the step of controlling said switch to communicate said instruct signal to a selected one of		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	a plurality of transmitters.	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
140. The method of claim 113, further comprising the step of transmitting to said one		Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
of a plurality of receiver stations					programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
a control signal to cause said one of a plurality of receiver stations to	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
tune to one of a	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	<p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>The inputted information is the entire range of frequencies or channels transmitted on the</p>	<p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>The inputted information is the entire range of frequencies or channels transmitted on the</p>
broadcast and a cablecast transmission	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 29 lines 11-15.</p>	<p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>The inputted information is the entire range of frequencies or channels transmitted on the</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
containing a specific instruct signal.			transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.		cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
141. The method of claim 89, wherein said at least one of said received plurality of control signals is inputted locally.		Column 16 lines 43-47.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 320 lines 24-31.	Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...
142. The method of claim 141, wherein said local display is generated and communicated in response to said received plurality of control signals.		Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 26 lines 4-11.</p>	<p>to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>
	Column 19 lines 45-53.	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
		<p>These signals instruct microcomputer, 205,</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference Language
		<p>decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal</p>
	<p>to generate several graphic video overlays,</p> <p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p>	<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p>
	<p>transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 26 lines 20-28.	information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
143. The method of claim 104, wherein said at least one control signal includes a schedule.	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...		Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6, ...
144. A method of coordinating a presentation at a plurality of output devices at a receiver station, said method comprising the steps of:  tuning a first receiver to a first  one of a broadcast	Column 18 lines 9-11.  Column 18 lines 13-14.  Column 10 lines 15-23.	FIG. 6B illustrates a method for automatic co-ordination of a multimedia presentation in one place, in this case a stereo simulcast.  The person turns on television, 202, and tunes to the proper channel.  The signal processing apparatus outlined in		Page 406 lines 34-35.  Page 407 lines 12-15.  Page 324 lines 8-24.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.  Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202, ...  The signal processing apparatus outlined in

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
transmission and a cablecast transmission;			FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.		Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes programming and	Column 18 lines 14-17.		TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, ...
a first control signal;	Column 18 lines 24-25.		These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
outputting the received programming on a first output device;	Column 18 lines 30-35.		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
				Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ...





Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, ...
tuning a second receiver based on said detected first control signal, to receive	Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.		Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
a second one of a broadcast transmission and a cablecast transmission,	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.		Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
wherein at least a portion of said second one of a broadcast transmission and a cablecast transmission is related to the received programming;	Column 18 lines 11-13.	A person decides to watch a program on television that is stereo simulcast on a local radio station, too.		Page 407 lines 9-11.	At the station of Fig. 7 and 7B, a subscriber decides to watch a particular television program the audio of which is stereo simulcast on a local radio station, ...
outputting the related at least a portion of said second one of a broadcast transmission and a cablecast transmission to a second output device	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...		Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
wherein said receiver station outputs said first tuned one of a	Automatically, by turning TV set, 202, to the channel with a stereo simulcast, the person has activated the stereo simulcast.	<p>Page 414 lines 13-27</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate</p>
Column 18 lines 26-28.	<p>Page 15 lines 16-22</p> <p>Page 411 lines 10-15</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 lines 6-9.</p>	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
broadcast transmission and a cablecast transmission and said related at least a portion of said second one of a broadcast transmission and a cablecast transmission simultaneously.					the radio simulcast of said channel at radio, 209.
145. A method of coordinating a presentation at a plurality of output devices at a receiver station, said method comprising the steps of:	Column 18 lines 9-11.	FIG. 6B illustrates a method for automatic co-ordination of a multimedia presentation in one place, in this case a stereo simulcast.	Page 406 lines 34-35.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.	
tuning a television receiver to a first	Column 18 lines 13-14.	The person turns on television, 202, and tunes to the proper channel.	Page 407 lines 12-15.	Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202, ...	
one of a broadcast transmission and a cablecast transmission;	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	
receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission	Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
includes television programming and					"program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, ...
a first control signal;	Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.		Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
outputting the received television programming on a first output device;	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...		Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
				Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
				Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
				Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
				Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
detecting the received first control signal;		Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, ....
tuning an information receiver, based on said detected first control signal, to receive a second one of a		Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
		Column 10 lines 15-23.	The signal processing apparatus outlined in	Page 324 lines 8-24.	The signal processing apparatus outlined in

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
broadcast transmission and a cablecast transmission,			FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.		Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
wherein at least a portion of said second one of a broadcast transmission and a cablecast transmission is related to the received television programming;		Column 18 lines 11-13.	A person decides to watch a program on television that is stereo simulcast on a local radio station, too.	Page 407 lines 9-11.	At the station of Fig. 7 and 7B, a subscriber decides to watch a particular television program the audio of which is stereo simulcast on a local radio station, ...
outputting the related at least a portion of said second one of a broadcast transmission and a cablecast transmission to a second output device		Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
				Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
				Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmitters may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Language	
		Reference		Language	
wherein said receiver station outputs said first tuned one of a broadcast transmission and a cablecast transmission and said related at least a portion of said second one of a broadcast transmission and a cablecast transmission simultaneously.	Column 18 lines 26-28.	Automatically, by turning TV set, 202, to the channel with a stereo simulcast, the person has activated the stereo simulcast.	Page 411 lines 10-15	series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...	
			Page 418 line 23 to page 419 line 15.	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.	
			Page 411 lines 6-9.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.	
				Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate the radio simulcast of said channel at radio, 209.	
146. A method of coordinating a presentation at a	Column 18 lines 9-11.	FIG. 6B illustrates a method for automatic co-ordination of a multimedia presentation in one place, in this case a	Page 406 lines 34-35.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
plurality of output devices at a receiver station, said method comprising the steps of:			stereo simulcast.		
tuning a television receiver to a first	Column 18 lines 13-14.	Column 10 lines 15-23.	The person turns on television, 202, and tunes to the proper channel.	Page 407 lines 12-15.	Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202, ...
one of a broadcast transmission and a cablecast transmissions;			The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes television programming and	Column 18 lines 14-17.		TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, ...
a first control signal;	Column 18 lines 24-25.		These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
outputting the received television programming on a first output device;	Column 18 lines 30-35.		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ...



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
	<p>respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of</p>
		<p>Page 414 lines 13-27</p>
		<p>Page 15 lines 16-22</p>
		<p>Page 411 lines 10-15</p>
		<p>Page 418 line 23 to page 419 line 15.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
detecting the received first control signal;		Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.		monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
tuning a radio receiver, based on said detected first control signal, to receive		Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, ....
a second one of a broadcast transmission and a cablecast transmission,		Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 410 lines 10-11.  Page 324 lines 8-24.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...  The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
wherein said second one of a broadcast transmission and a cablecast transmission includes radio programming, said radio programming being related to said		Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
received television programming;	Column 18 lines 11-13.	A person decides to watch a program on	<p>Page 414 lines 13-27</p> <p>Page 15 lines 16-22</p> <p>Page 411 lines 10-15</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 407 lines 9-11.</p>	<p>above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>At the station of Fig. 7 and 7B, a subscriber</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
147. A method of communicating subscriber station information from a subscriber station to at least one remote data collection station, said method comprising the steps of:		Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20.  Page 273 lines 4-6.  Page 273 lines 21-25.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...  The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.  ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
(1) inputting a subscriber reaction at the subscriber station;		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
(2) receiving at said subscriber station information that designates at least one		Column 20 lines 27-37.	Five minutes later,	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Reference	
		Language		Language	
of at least one instruct signal to process and an output to deliver in consequence of a subscriber input;		<p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p>		<p>consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory and to cause an instance of ...</p>	
		<p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form</p>		<p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p>	
				<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			and instruct control means, 226, to activate printer, 221.	Page 474 lines 3-7.	transmission.... ... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
(3) determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...		Page 472 lines 16-17.  Page 472 lines 27-32.	controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...  (At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145 and 203, ...
(4) processing at least one instruct signal which is	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...		Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
effective to coordinate a	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular <b>covert control</b> information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...
			Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " <b>covert control.</b> ")
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 282 line 2 to page 283 line 33.	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt	Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
media presentation at said subscriber station		Column 20 line 11.	the incoming encrypted recipe.		encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
		Column 20 lines 16-19.	Coordinating Print and Video	See generally page 469 line 1 to page 516 line 13. (Page 469 lines 1-2 quoted herein.)	Automating U. R. Stations ... Examples #9 and # 10 Continued
			Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and	Coordinating Computers, Television, and Print
in consequence of said step of determining; and		Column 19 lines 62-63	... and [the instruction signal] is transmitted in the programming transmission.	Page 470 lines 9-12.	... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."
		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 25 line 34 to page 26 line 1.	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
				Page 472 lines 15-17.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
(5) transferring from said subscriber station to said at least one remote data collection station at least one datum confirming delivery of at least one of:					... an instruction signal is ... embedded in the programming transmission, and transmitted.
					... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
		Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>that site can determine for billing purposes that the recipe was,</p> <p>first, ordered</p> <p>and, second, delivered.</p>	<p>Page 44 lines 26-30.</p> <p>Page 471 lines 26-31.</p> <p>Page 473 lines 3-8.</p> <p>Page 472 lines 23-27 with</p> <p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p>	<p>records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
(a) said at least one instruct signal from said step of processing; and	Column 20 line 57.	...first, ordered ...	Page 472 lines 23-27 with  Page 471 lines 14-16.	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.  Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#....
(b) said effect from said step of processing.	Column 20 lines 57-58.	... and, second, delivered.	Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
148. The method of claim 147, wherein said at least one instruct signal is input by a subscriber based on viewing and listening to present viewable and audible programming, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
		<p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing</p>
<p>receive at least one of specific mass medium programming,</p> <p>specific data,</p>	<p>Column 18 lines 24-25.</p> <p>Column 19 lines 35-37.</p>	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 410 lines 10-11.</p> <p>Page 449 lines 13-26.</p>
	<p>These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
specific news items, and		Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)  Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
specific computer control instructions; and		Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference.	Language	Reference	Language

receiving said at least one of said specific mass medium programming, said specific data, said specific news items, and said specific computer control instructions	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 445 line 24 to page 446 line 1.</p>	<p>predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p>
in accordance with said at least one identifier.	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	

149.	The method of	Column 20 lines 23-26.	The viewer then presses buttons 567 on	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
claim 147, wherein said at least one instruct signal is input by a subscriber, said method further comprising the steps of:			local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...		of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.	
a subscriber instruction to one	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
of process and present at least one of mass medium programming, data, news items, and computer control instructions in a specific fashion; and	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".	
at least one of processing	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.  ... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
			Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
	first, ordered		Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
	and, second, delivered.		Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
			Page 473 line 29 to	Receiving said message causes the controller,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

and presenting at least one of said specific mass medium programming, said specific data, said specific news items, and said specific processor control instructions in accordance with said subscriber instruction.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 474 line 1.	39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
			Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

150.	The method of	Column 20 lines 27-32.	Five minutes later, a signal is identified in	Page 471 line 26 to	Five minutes later, said program originating
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
claim 147, wherein said information that designates one of a specific subscriber input and said at least one instruct signal is detected in an information transmission from one of a data source and a programming source, said method further comprising the steps of:			the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	page 472 line 17.	studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
programming a processor to respond to information communicated from said one of said data source and said programming source;	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.		Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
receiving the information transmission from said one of said data source and said programming source;	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.		Figs. 2A-2C. Page 35 lines 1-6.  Page 35 lines 16-18.	<i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.  The second path, designated B, detects signal information embedded in the audio

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
inputting at least a portion of said information			Page 35 lines 27-30.	information portion of said television channel signal.  The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...
			Page 36 lines 1-3.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.
			Page 36 lines 18-20.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.
			Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and  Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
			Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201.	Page 470 lines 1-3 and	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
transmission to a control signal detector;			Julia Childs's "The French Chef" is one such program.	Page 470 lines 9-12.	Meals of India."
		Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
detecting one of data and said at least one instruct signal in said information transmission; and		Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
passing said detected one of said data and said at least one instruct signal to said processor.		Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 472 lines 4-12.  Page 37 line 26 to page 38 line 8.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

151. A method of controlling a remote	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates
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Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
station including one of a broadcast	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
transmitter	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
and a cablecast	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
transmitter for transmitting television programming,	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
a plurality of selective transfer devices each operatively connected to said one of said broadcast transmitter and said cablecast transmitter for communicating said television programming,  a television receiver for receiving said television programming,  wherein each of said at least one remote television transmitter station is adapted to detect the presence of at least one control signal,	Column 10 lines 41-43.	modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.  ... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.	and 91, and channel combining and multiplexing system, 92.  ... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,	
	Column 10 lines 30-39.	The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.	
	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ....	
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
and to deliver at said one of said broadcast transmitter and said cablecast transmitter said television programming, said method comprising the steps of:	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 59 lines 29-33	transmission that are addresses to ITS apparatus of said intermediate transmission station;....  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 59 lines 29-33. Page 34 line 35 to page 35 line 1.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. This base band signal is then transferred through separate paths to three separate detector devices.
	Column 11 lines 30-31.	... transmit each program unit to cable field distribution system, 93.	Page 326 line 35 to page 327 line 2.  Page 328 line 13.	... each program unit, ... the station should transmit the unit, ...  ... transmit the programming of each received program unit.
	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
(1) receiving said	Column 19 line 53-56.	Subsequently in the program, the host says,	Page 25 lines 26-33.	During this time the program may show the

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
television programming at said at least one origination transmitter station and			"Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.		so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
delivering said television programming to at least one origination transmission transmitter, said television programming having an instruct signal	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
which is effective at at least one of said remote television transmitter station	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution	

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Reference	Support to instant specification.	Language
				<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	
	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>				

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 12 lines 38-41.	... signal generators, 82, 86, and 90, also well known in the art, that controller/computer, 73, can instruct to add signals to programming as required.		Page 354 lines 21-24.	... and signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM information as required.
	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...		Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and said at least one receiver station to	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
			Page 268 line 28 to page 269 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)	
	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is	Page 436 line 9 to page 437 line 6.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Reference
Language	Language	Language	Language
		<p>being televised on channel X.</p> <p>Then, in a predetermined fashion, microcomputer, 205, may</p> <p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record</p>	<p>the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said</p> <p>program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,</p>
		Page 439 lines 9-15.	
		Page 295 lines 6-8.	
		Page 445 lines 24-27.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			"Wall Street Week,"	Page 446 lines 18-23.	...
			and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
				Page 446 lines 17-21.	...and to tune monitor, 202M, in a predetermined fashion.
		Column 19 lines 42-44.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 19 lines 60 to page 20 line 2.		At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2.	Microcomputer, 205, is preprogramed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
				Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
coordinate a media presentation;	Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					<p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
(2) receiving said at least one control signal	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	Page 325 line 34 to page 326 line 11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.	<p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p>
which at the remote television transmitter station operates to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input,	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system,	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
control the communication of said television programming; and		<p>74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>		<p>71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			Page 84 lines 26-28.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...</p>
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
(3) transmitting said at least one control signal from said at least one origination transmitter station	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page	At this point, an instruction signal is generated

Claim Language	Support to parent application filed November 3, 1981...	Support to instant specification.	Language
Reference	Language	Reference	Language
		<p>26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p>
<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming ...</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
before a specific time.		Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 49 lines 26-27.  Page 326 line 33 to page 327 line 2.	Meter-monitor segments contain meter information and/or monitor information.  Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
152. The method of claim 151, wherein said at least one control signal includes at least one of a code and a datum which operates at the remote television transmitter station to		Column 2 lines 63-66.  Column 3 lines 6-8.  Column 7 lines 36-37.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 14 lines 27-29.  Page 14 line 35 to page 15 line 2.  Page 30 lines 7-9.  Page 36 line 32 to page 37 line 3.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.  Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ....  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62,
identify said television programming, said method further comprising the step of:		Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	<p>and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
<p>transmitting a schedule which</p> <p>operates at the remote television transmitter station to</p>	<p>Column 11 lines 39-41.</p> <p>Column 11 lines 38-43.</p>	<p>... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 328 lines 9-10.</p> <p>Page 326 lines 28-30.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution</p>

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Reference	Support to instant specification.	Language
<p>communicate said television programming to said at least one origination transmitter at said specific time.</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				to modulator, 87.
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153. The method of claim 151, further comprising the step of: embedding	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
a specific one of said at least one control signal in said specific television programming before transmitting said television programming to said remote television transmitter station.	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Claim Language	Reference	Reference
Claim Language	Language	Language
<p>154. The method of claim 151, wherein said specific time is a scheduled time of transmitting said television programming at said remote television transmitter station and said at least one control signal is effective at the remote television transmitter station to control at least one of said plurality of selective transfer devices at different times.</p>	<p>Column 11 lines 28-31.</p>	<p>Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.</p> <p>Page 326 line 33 to page 327 line 2.</p> <p>Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...</p>
<p>155. A method controlling at least one remote transmitter station to</p> <p>deliver a receiver specific output at a receiver station and controlling said receiver station to</p>	<p>Column 11 lines 39-43.</p> <p>Column 20 lines 27-37.</p>	<p>... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by</p> <p>... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered- information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		<p>processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p> <p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form</p>	<p>invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the</p>	<p>processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the</p>
			<p>Page 476 line 34 to Page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 474 lines 3-7.</p>	
		<p>and instruct control means, 226, to activate printer, 221.</p>		

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
communicate at least one receiver specific datum to a remote data collection station,	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...  [Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.  ... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...  Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...  One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	Executing said instructions also causes controller, 20, to initiate a particular signal
		first, ordered	Page 471 lines 26-31.  Page 473 lines 3-8.	
			Page 472 lines 23-27 with	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
	<p>and, second, delivered.</p> <p>The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.</p> <p>Column 8 lines 46-55.</p> <p>The controller, 20, also controls the automatic telephone dialing device, 24, to allow the apparatus to automatically output its own information in accordance with a predetermined sequence and to change telephone numbers dialed as required.</p>	<p>record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... instruct-to-receive signal, causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer. When ...</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Controller, 20, transfers the telephone number, 1-800- CHARGES, to auto dialer, 24, and</p> <p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p> <p>Page 33 lines 18-20.</p> <p>Page 273 lines 4-6.</p> <p>Page 273 lines 21-25.</p> <p>Page 273 lines 6-8.</p> <p>Page 274 lines 11-13.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
wherein said receiver station is remote from	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and  Page 470 lines 9-12.	causes the dialing of said number.  ...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
said at least one remote transmitter station and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
said remote data collection station is remote from said receiver station, said method comprising the steps of:	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 324 lines 18-21.  Page 33 lines 18-20.  Page 273 lines 4-6.  Page 273 lines 21-25.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.  Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...  The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.  ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
(1) receiving at	Column 10 lines 61-64.	Incoming programming transmissions are	Page 324 lines 23-33.	The station receives programming from many

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said at least one remote transmitter station			received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
at least one instruct signal	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 lines 34-35.	At this point, an instruction signal is generated at said program originating studio, ...
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
which operates to coordinate	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,		Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p> <p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p>	<p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p> <p>Page 478 lines 1-5.</p>	<p>invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Automating U. R. Stations ... Examples #9</p>
	Column 20 line 11.	Coordinating Print and Video	See generally page 469	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a media presentation and operates at said receiver station		Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	line 1 to page 516 line 13. (Page 469 lines 1-2 quoted herein.)	<b>and # 10 Continued</b> <b>Coordinating Computers, Television, and Print</b>  ...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
	to assemble and communicate said at least one receiver specific datum to said remote data collection station;	Column 19 lines 62-63  Column 9 line 68 to column 10 line 2.	... and [the instruction signal] is transmitted in the programming transmission.  The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Page 470 lines 19-21.  Page 25 line 34 to page 26 line 1.  Page 32 lines 20-21.  Page 223 lines 22-33.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.  ... an instruction signal is ... embedded in the programming transmission, and transmitted.  Buffer/comparator, 14, operates under control of controller, 20, ...  Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
		Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 31 line 30 to page 32 line 1.  Page 472 lines 23-27.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...  ... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
(2) receiving a control signal which operates at said at least one remote transmitter station to control the communication of said at least one instruct signal and		Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
communicating said		Column 11 lines 39-41.	... the programming schedule received	Page 326 lines 28-30.  Page 328 lines 9-10.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.  ... with information of the programming



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
control signal to said at least one remote transmitter station;			earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 326 lines 28-30.	schedule, received earlier from input, 74, and/or network, 98, ...  ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
(3) receiving at least one of a code and an indication	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
designating said at least one instruct signal to be transmitted by said at least one remote transmitter station,	Column 2 lines 63-66.  Column 11 lines 38-39.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  By comparing identification signals on the incoming programming ...	Page 14 lines 27-29.  Page 327 line 35 to page 328 line 13.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
<p>wherein said at least one of said code and said indication to serve at said receiver station as a source from which to select said at least one receiver specific datum; and</p>	<p>Column 20 lines 33-36.</p>	<p>... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>
		<p>Page 84 lines 26-28.</p>
		<p>Page 28 lines 26-27.</p>
		<p>Page 49 lines 26-27.</p>
		<p>Page 476 line 34 to page 477 line 8.</p>
		<p>Page 477 lines 8-17.</p>

schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

SPAM signals are generated at original transmission stations or intermediate transmission stations and **embedded in** television or radio or other **programming transmissions** ...

... **monitor information that identifies what programming** is available, ...

Meter-monitor segments contain meter information and/or monitor information.

(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.

In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language

					cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
(4) transmitting at least one information transmission including	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...		Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
said at least one instruct signal and	Column 20 line 27.	Five minutes later, ...		Page 471 lines 26-28.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message ...
said at least one of said code and said indicator from said at least one remote transmitter station.	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...		Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.		Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.

156. The method of claim 155, wherein said at least one receiver specific datum	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,		Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and
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Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
evidences at least one of:(1) at least one of the availability, use, and usage of information; and				how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.  ... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...  Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....  One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...  Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.  Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
	that site can determine for billing purposes that the recipe was,		Page 44 lines 26-30.	
			Page 471 lines 26-31.	
			Page 473 lines 3-8.	
	first, ordered		Page 472 lines 23-27 with	
			Page 471 lines 14-16.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			and, second, delivered.	Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
(2) a receiver specific response to said at least one instruct signal.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,		Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		that site can determine for billing purposes that the recipe was,		Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
				Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ....
				Page 473 lines 3-8.	One minute later, said program originating

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		first, ordered	Page 472 lines 23-27 with	studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...  Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.  Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...
		and, second, delivered.	Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
157. The method of claim 155, wherein said signal includes a portion of a downloadable code.	Column 20 lines 27-29.  Column 3 lines 6-8.  Column 20 lines 37-42.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...  Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 471 line 35 to page 472 line 1.  Page 14 line 35 to page 15 line 2.  Page 477 lines 8-23.  Page 281 lines 1-6.  Page 282 line 2 to page 283 line 33.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...  Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular <b>covert control</b> information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...  By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " <b>covert control</b> .")  ... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
		Reference	Language
		Reference	Language
158. A method of controlling at least one receiver station,			<p>message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "11111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.
one receiver station,	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	<p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 59 lines 29-33.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or	Page 390 lines 30-35.



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said at least one receiver station including	Column 3 lines 48-51.	office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.	station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a mass medium programming receiver,	Column 20 lines 16-19.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 12 lines 30-35.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
a signal detector,	Column 20 lines 27-29.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and  Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
at least one of at least one computer and at least one processor, wherein	Column 20 lines 29-30.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...  ... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 470 lines 19-21.  Page 471 line 35 to page 472 line 1.  Page 472 lines 4-12.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.  At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...  ... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>said at least one receiver station is adapted to detect the presence of at least one control signal</p> <p>and to input a subscriber reaction to a specific offer communicated in mass medium programming, said method comprising the steps of:</p>	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 37 line 26 to page 38 line 8.	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p>	<p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber</p>
	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig.	Page 471 lines 6-25.	<p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			1), of signal processor, 200, to hold and process further ...		is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
receiving an instruct signal at a transmitter station and delivering	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.		The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 4 lines 5-6.  Column 20 lines 27-33.	These techniques employ signals embedded in programs.  Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator,	Page 13 lines 25-26.  Page 471 line 26 to page 472 line 17.		The present invention employs signals embedded in programming.  Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said instruct signal to a transmitter, said instruct signal being effective at said at least one receiver station to	Column 11 lines 50-57.	225, signal processor, 200, should, ...  ... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
coordinate a media presentation;	Column 20 lines 33-36.  Column 20 lines 47.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...  [when the transmission] ... is received, box 222, transfers the transmission ...	Page 473 lines 29-31.  Page 474 lines 2-7.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-and-shopping-list instructions at microcomputer, 205, ...  Executing said generate-recipe-and-shopping-list instructions causes microcomputer, 205, to

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221; ...
receiving at least one of a code and	Column 10 lines 61-64.	Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
a datum at said transmitter station, wherein said at least one of said code and said datum	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
designates at least one of said instruct signal and	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message

Claim Language	Support to parent application filed November 3, 1981:		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and <b>embedded in television or radio or other programming transmissions ...</b></p> <p><b>... monitor information that identifies what programming is available, ...</b></p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller,</p>
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
said subscriber reaction;	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
receiving at least one control signal at said transmitter station, wherein said at least one control signal at said at least one receiver station operates to	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...  The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions,

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
<p>at least one of decrypt and enable at least a portion of said instruct signal;</p>	<p>Column 20 lines 37-42.</p>	<p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200,</p> <p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p>	<p>Page 477 lines 8-23.</p> <p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p>	<p>and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular <b>covert control</b> information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "<b>covert control</b>.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
transferring at least one of said at least one of a code and a datum and said at least one control signal to said transmitter at said transmitter station; and			to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	is "100110" ... and modify the information at said location to be "111111".  (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.		Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...		Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded		Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
transmitting said instruct signal and said at least one of said at least one of a code and a datum and said at least one control signal from said transmitter station.	Column 12 lines 45-47.	together on a single line of video or sequentially in audio.		single line of video or sequentially in audio.
	Column 4 lines 5-6.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...  These techniques employ signals embedded in programs.	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 13 lines 25-26.  Page 14 lines 27-29.	The present invention employs signals embedded in programming.  (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...
159. The method of claim 158, wherein at least one of said at least one control signal and said at least one of a code and a datum is embedded in one of a television signal and a signal containing said television programming.	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...		Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
160. The method of claim 158, wherein at least one of said instruct signals and said at least one control signal is effective to	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...		Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567#

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
output a subscriber order for one of	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	information exists at said last-local-input-# memory and to cause ...	
a product and	Column 20 line 21.	... a printed copy ...	Page 471 line 8.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	
a service offered in said specific offer, said method further comprising the step of:	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	... your own printed copy ...  (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.	
			Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....	
transmitting a portion of	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
information which serves as a basis at said at least one receiver station for	Column 20 lines 27-33.	<p>field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
one of selecting and	Column 20 lines 49-54.	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p>
one of selecting and	Column 20 lines 49-54.	<p>Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via</p>	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
assembling specific information to communicate to a remote data collection site.		processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.		microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
			Page 32 lines 20-21.	Buffer/comparator, 14, operates under control of controller, 20, ...
			Page 223 lines 22-33.	Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.
			Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 7 lines 65-67.</p> <p>Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.</p> <p>Column 20 lines 54-58.</p> <p>when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,</p>	<p>Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.</p> <p>when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,</p> <p>that site can determine for billing purposes that the recipe was,</p>	<p>Page 31 line 30 to page 32 line 6.</p> <p>Page 28 lines 25-35.</p> <p>Page 44 lines 26-30.</p> <p>Page 471 lines 26-31.</p>	<p>record said transferred meter record in its preprogrammed fashion.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p> <p>[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				consists of ... meter-monitor information,....
			Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
	first, ordered		Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
	and, second, delivered.		Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
			Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
161. The method of claim 158, wherein said at least one control signal incorporates a portion of downloadable code.	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received signals, with channel identifiers, to cable	Page 325 line 34 to page 326 line 11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Reference
Language	Language	Language	Language
	<p>program controller and computer, 73.</p> <p>Column 20 lines 27-37.</p> <p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p> <p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form</p>	<p>transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said</p>	<p>Page 326 lines 16-18.</p> <p>Page 471 line 26 to page 472 line 17.</p> <p>Page 476 line 34 to Page 477 line 8.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>and instruct control means, 226, to activate printer, 221.</p>	<p>Page 477 lines 8-17.</p> <p>Page 474 lines 3-7.</p>	<p>"Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p>
162. The method of claim 158, wherein said mass medium programming is to be printed.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	<p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p>	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... <b>generate-recipe</b>... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
detecting one of a presence and an	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	various channels to the cable system's field distribution system, 93, ...
absence of	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
control signal and	Column 8 lines 58-60.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 290 lines 26-31.	... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...
			Page 291 lines 21-24.	In the fashions described above, so

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a cablecast	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 59 lines 29-31.  Page 29 lines 4-7.	transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
control signal;	Column 8 lines 58-60.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 290 lines 26-31.  Page 291 lines 21-24.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.  ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...  In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...
inputting an instruct-to-react signal to a processor	Column 8 lines 27-29.	The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.	Page 59 lines 29-31.  Page 248 line 35 to page 249 line 5.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.  In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
based on said step of detecting;	Column 8 lines 62-65.	<p>Page 251 lines 3-8.</p> <p>Page 253 lines 10-11.</p> <p>Page 253 lines 19-22.</p> <p>Page 258 lines 10-19.</p>	channel 9, wireless channel 13, then to repeat said pattern.
			Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.
			Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...
controlling said processor to output specific information in response to said instruct-to-react signal; and	Column 8 line 68 to column 9 line 4.	<p>Page 257 line 24 to page 258 line 19.</p>	Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.
			Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
	Column 9 lines 53-57.		Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Reference	Language
				<p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43,</p>	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>251 lines 8-11.</p> <p>Page 263 lines 19-24.</p>	

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
coordinating a media presentation on the basis of said specific information received from said processor based on said step of controlling said processor.	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 37 lines 26-28.	<p>which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p>
			<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
164. The method of claim 163, wherein a buffer is operatively connected to said processor for buffering input, said method further comprising the step of:	Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer..
	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 156 line 33 to page 157 line 10.	Fig. 3A shows one such preferred controller, 39. One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series. Buffer, 39A, and processor, 39B, are the first buffer and processor of the series and perform the forward error correcting functions of controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. Buffer, 39E, and control processor, 39J, are the third buffer and processor. All controlled functions invoked at controller, 39, by received SPAM signals are invoked at control processor, 39J.  As Fig. 3A shows, each processor, 39B, 39D, and 39J, has associated RAM and ROM and, hence, constitutes a programmable controller in its own right.
bypassing said buffer and inputting said instruct-to-react signal directly to said processor.	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.		Page 251 lines 3-8.  Page 253 lines 10-11.  Page 253 lines 19-22.	Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.  Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...  Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.
	Column 8 line 68 to	Buffer/comparator, 8, and monitor or		Page 258 lines 10-19.	Controller, 20, has capacity for keeping track

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	column 9 line 4.	processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	<p>Page 254 line 23 to page 255 line 3.</p>	<p>of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>... information and transmit it to digital detector, 34; causing digital detector, 34, to detect the binary information of said signal information and transfer said binary information to controller, 39. Receiving said binary information at controller, 39, causes the binary SPAM information of the wireless channel 5 transmission to be checked and corrected, as necessary, at processor, 39B; converted into locally usable binary information at processor, 39D; and checked for end of file signal information at EOFs valve, 39F, and transmitted to the null output of matrix switch, 39I, until EOFs valve, 39F, detects an end of file signal. In due course, said EOFs valve, 39F, receives the aforementioned end of file signal causing said valve, 39F, to detect said signal and transmit the aforementioned interrupt signal of EOFs-signal-detected information to said control processor, 39J. Receiving said EOFs-signal-detected ...</p> <p>In due course said remote wireless station transmits the end of file signal that terminates said information segment, and the EOFs valve, 39F, of decoder, 30, receives and detects said signal, in its end of file detecting fashion, causing said valve, 39F, to transmit</p>
			<p>Page 259 lines 3-29.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					<p>the aforementioned EOFs-signal-detected information to said control processor, 39J. Just as applied in the case of the 2nd command (#5), receiving said EOFs-signal-detected information causes control processor, 39J, to cause EOFs valve, 39F, to discard all information of said end of file signal; to cause said matrix switch, 39I, to cease transferring SPAM message information from said EOFs valve, 39F, to its null output information and commence transferring SPAM message information from said valve, 39F, to said control processor, 39J; then to cause EOFs valve, 39F, to recommence processing inputted signal words in its preprogrammed fashion and transferring said words to matrix switch, 39I; and to commence waiting to receive from said switch, 39I, the binary information of a subsequent SPAM header.</p> <p>Subsequently, said remote wireless station transmits the second combining synch command of the "Wall Street Week" program. (Hereinafter, said command may be called the "3<sup>rd</sup> command (#5).")</p>
165. The method of claim 163, wherein said processor processes a datum designating at least one of a television channel and a television program, said method further comprising at least one of the steps of:	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a tuner to tune a receiver to receive said at least one of said television channel and said television program designated by said processed datum;				Page 436 line 9 to page 437 line 3.	programming.) Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ...
				Page 439 lines 14-15.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205; to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	<p>Page 446 lines 17-21.</p> <p>predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>	
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	
controlling a selective transfer device to input to			<p>Page 445 line 24 to page 446 line 1.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes</p>	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controlling a control signal detector to search for at least one control signal in said at least one of said television channel and said television program designated by said processed datum;	Column 17 lines 28-33.	detector devices. ... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)	Page 318 lines 2-7.	detector devices. By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
controlling a selective transfer device to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
input to a computer control signals detected in said at least one of said television channel and said television program designated by said processed datum;	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 446 lines 17-21.  Page 21 lines 23-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  ... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p>	<p>microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p>
controlling a computer to respond to control signals detected in said at least one of said television channel and said television program designated by said processed datum;	<p>Column 19 lines 42-44.</p> <p>Column 19 lines 46-53.</p>	<p>These signals instruct microcomputer, 205, ...</p> <p>Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Page 21 lines 20-24.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
			inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
		Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes a subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...	Page 26 lines 4-11.
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	
		The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	
controlling a television monitor to display at least one of video and audio contained in said at least one of said television channel and said television program designated by said processed datum;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.
		... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	
		In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 446 lines 17-21.

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
		Reference	Language
controlling a storage device to process one of video and audio contained in said at least one of said television channel and said television program designated by said processed datum; and	Column 19 lines 23-27.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 437 lines 1-6.
			Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
			Page 439 lines 9-15.
			Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
			... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... ... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....
controlling a selective transfer device to communicate to at least one of a storage device and a television monitor said at least one of said television channel and said television program	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 lines 24-27. Page 446 lines 18-23.
			Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a

Claim Language	Reference	Language	Reference	Support to instant specification. Language
designated by said processed datum.			<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
166. The method of claim 163, wherein said processor processes a datum designating at least one specific channel of one of a multichannel cable signal and	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
a multichannel broadcast signal, said method further comprising at least one of the steps of:	Column 6 lines 23-26.		said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.
controlling a tuner to tune a converter to receive said	Column 19 lines 27-29.	Page 439 lines 14-15.  Page 29 lines 4-7.	... to receive the transmission of cable channel 13; ...  Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at least one specific channel designated by said processed datum;	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
			Page 295 lines 6-8.	
			Page 439 lines 9-15.	
			Page 419 line 34 to page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a selective transfer device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor,



Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
a control signal detector at least a portion of said	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 6 lines 48-50.  Column 19 lines 1-4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...  This base band signal is then transferred through separate paths to three separate detector devices.  In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...  This base band signal is then transferred through separate paths to three separate detector devices.  Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and
at least one specific channel designated by said processed datum;		Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8.  Page 24 lines 5-6.  Page 451 lines 7-9.  Page 34 line 35 to page 35 line 1.  Page 419 line 34 to page 420 line 2.	

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		channels and/or radio channels for programming of interest to play or record.	Page 11 lines 5-10.
controlling a control signal detector to search for at least one control signal in said	Column 17 lines 28-33.	... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)	Page 318 lines 2-7.
at least one specific channel designated by said processed datum;	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.
controlling a selective transfer device to	Column 19 lines 27-29.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.
		receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.  By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...  Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
input to a computer control signals detected in said	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.		Page 446 lines 17-21.	said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
				Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
				Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions' subscribe station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
at least one specific	Column 19 lines 1-4.	These signals instruct microcomputer, 205, ...  In the same fashion, microcomputer, 205,		Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
				Page 419 line 34 to	Fig. 7C illustrates methods for monitoring
					I2CR 357, Appendix A, Page 766

Fig. 7C illustrates methods for monitoring

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
channel designated by said processed datum;		may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	page 420 line 2.  Page 11 lines 5-10.	multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a computer to respond to control signals detected in said	Column 19 lines 42-44.  Column 19 lines 46-53.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 21 lines 20-24.  Page 23 line 35 to page 24 line 16.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
at least one specific channel designated by said processed datum;	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 419 line 34 to page 420 line 2.</p> <p>Page 11 lines 5-10.</p>	<p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.</p> <p>The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.</p>
controlling a television monitor to display at least one of video and audio contained in said	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
at least one specific channel designated by said processed datum;	Column 19 lines 1-4.	Page 446 lines 17-21.	decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to page 420 line 2.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	controlling a storage device to process one of video and audio contained in said	Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a storage device to process one of video and audio contained in said	Column 19 lines 23-27.	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
		Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...

Claim Language		Support to parent application, filed November 3, 1981.	Support to instant specification.
Reference		Language	Language
at least one specific channel designated by said processed datum; and	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 295 lines 6-8. Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... ... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,.... ... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			Page 439 lines 9-15. Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.
			Page 445 lines 24-27. The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
			Page 446 lines 18-23. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular
			Page 419 line 34 to page 420 line 2. Page 11 lines 5-10.
controlling a selective transfer device to communicate to at least one of a storage device and an output device said	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 437 lines 1-6.

Support to parent application filed November 3, 1981		Support to instant specification.	
Claim Language	Reference	Language	Reference
at least one specific channel designated by said processed datum.	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for	apparatus ...
			Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...
			... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
			... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...
			... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			... instructions causes controller, 20, to switch power on to monitor, 202M, ...
			Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
at least one specific channel designated by said processed datum.	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for	... and to tune monitor, 202M, in a predetermined fashion.
			In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Page 295 lines 6-8.
			Page 439 lines 9-15.
at least one specific channel designated by said processed datum.	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for	Page 445 lines 24-27.
			Page 446 lines 18-23.
			Page 445 line 24 to page 446 line 1.
			Page 445 line 35 to page 446 line 1.
at least one specific channel designated by said processed datum.	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for	Page 446 lines 17-21.
			Page 419 line 34 to page 420 line 2.

Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

		programming of interest to play or record.	Page 11 lines 5-10.	information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
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167. A method of controlling	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular predetermined and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
a receiver station, wherein said receiver station has	Column 17 lines 47-53.	Page 451 line 3. Page 390 lines 30-35.	the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
a processor for	Column 6 lines 23-26.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
passing and	Column 7 lines 47-49.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
executing instructions and	Column 7 lines 50-58.	Page 30 lines 29-30. Page 31 lines 10-18.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller; 12. Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:	Column 7 lines 60-64.	signals are to be passed externally, processor unit, 12, identifies, in a predetermined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.  Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.  Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.	
receiving one of a broadcast transmission and a cablecast transmission;	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	
demodulating said one of said broadcast transmission and said cablecast transmission to detect an information transmission thereon,	Column 6 lines 45-48.	The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.	Page 34 lines 31-35.	The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.	
said information transmission including an instruct signal which	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission	

Claim Language	Reference	Language	Reference	Support to instant specification.	Language
<p>is effective to coordinate media presentation;</p>	<p>Column 19 lines 31-34.</p>	<p>FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting and receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of</p>	<p>Support to parent application filed November 3, 1981.</p>

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Reference	Language
		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	Page 25 line 34 to page 26 line 2.	
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
<p>detecting said instruct signal on said information transmission and passing said instruct signal to said processor;</p>	Column 6 lines 48-50.	<p>Page 451 line 3.</p> <p>Page 34 line 35 to page 35 line 1.</p>	<p>subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>
	Column 7 lines 6-11.	<p>Page 29 line 33 to page 30 line 5.</p>	<p>Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.</p>
	Column 7 lines 47-49.	<p>Page 30 lines 29-30.</p>	<p>Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.</p>
<p>delaying, under processor control, the passing of said instruct signal to a controllable apparatus;</p>	Column 7 lines 60-64.	<p>Page 31 lines 26-29.</p>	<p>Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.</p>
<p>passing said instruct signal to said controllable apparatus</p>	Column 19 lines 63-64.	<p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
on the basis of the timing signal; and coordinating said media presentation based on said instruct signal.	Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, 14.	<p>Page 33 lines 18-20.</p> <p>Page 149 lines 8-15.</p> <p>For example, page 150 lines 29-35.</p> <p>For example, page 152 line 19 to page 153 line 1.</p>	<p>predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...</p> <p>Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, to execute particular preprogrammed transfer- and-meter instructions ...</p> <p>Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message under control of said transfer-and-meter instructions commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions. Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory,</p>

Claim Language	Support to parent application filed November 3, 1981:		Support to instant specification.	
	Reference	Language	Reference	Language

	Column 8 lines 56-58. See Fig. 1.	To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus.	Page 33 lines 18-21. See Fig. 2.	which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")  Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.
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168. A method of communicating data and update material to at least one	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
	Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
mass medium programming receiver station, each of said at least one mass medium	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6;



Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
programming receiver station including		6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.
at least one of a broadcast receiver and a cablecast receiver,	Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13.
a data storage device,	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 424 lines 2-9.
a control signal detector,	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 426 lines 10-18.
		and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ... Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmit particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark. Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.) Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the	

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
and a computer, wherein each of said at least one mass medium programming receiver station is adapted	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
to detect and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
respond to at least one instruct signal and to	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
store data for subsequent processing,	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  Subsequently, a second series of instructions is embedded and transmitted at said program

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said method comprising the steps of:			several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.		originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
(1) receiving data	Column 10 lines 30-39.	The facility receives programming from		Page 324 lines 23-31.	The station receives programming from many

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
to be transmitted and			<p>many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>		<p>sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
delivering the data to a transmitter;		<p>Column 19 lines 43-44.</p> <p>Column 10 lines 40-47.</p>	<p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	<p>Page 21 lines 23-24.</p> <p>Page 324 line 31 to page 325 line 4.</p>	<p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>
(2) receiving the at least one instruct signal which at the		Column 10 lines 30-39.	<p>The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p>	Page 324 lines 23-31.	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference.	Language	Reference	Language
at least one mass medium programming receiver station is effective to coordinate a media presentation based on the data;	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
		This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 37 line 26 to page 38 line 8.	decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...	
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
			Page 451 line 3.	And the Fig. 1C combining is displayed.	
(3) transferring said at least one instruct signal to the transmitter; and	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(4) transmitting at least one information transmission including said data and said at least one instruct signal.			includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.		includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...		Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.		Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes

Support to parent application, filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		said apparatus to perform a particular function or functions. A command is always constituted of at least a	
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)	Page 26 lines 20-28.
	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.
		Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
169. The method of claim 168, wherein at least one of identification data	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that	Page 328 line 22 to page 329 line 1.
		For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and said at least one instruct signal is embedded in a television signal containing said data.			leads to modulator, 87.		programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...		Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference		Reference	
		Language		Language	
170. The method of claim 168, wherein said step of transmitting directs one of a broadcast transmission and a cablecast transmission to a plurality of said at least one mass medium programming receiver station at the same time and	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...	
each of said plurality of said at least one mass medium programming receiver station at least one of receives and responds to said at least one instruct signal concurrently.	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
	Column 20 lines 12-15.	FIG 6D illustrates one method for coordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.	Page 469 lines 3-6.	Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.	
	Column 3 lines 48-51.	Another method has application at receiver	Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)	
			Page 12 lines 30-35.	It is the further purpose of this invention to	

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference

		sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.		provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
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171. The method of claim 168, further comprising the steps of: receiving said data at a first receiver in a transmitter station;	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
communicating said data from said first receiver to a memory location; and	Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
storing said data at said memory location	Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
for a period of time prior to communicating said data to the transmitter.	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
172. A method of delivering user specific programming at	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
a receiver station, said receiver station including	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
a receiver,	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 396 lines 8-10. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. ... and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor,	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
a detector,	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
a computer, and	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	
at least one first output device, said method comprising the steps of:	Column 19 lines 27-28.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...	Page 445 line 24 to page 446 line 1.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...	
receiving first data and	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
video programming,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
said video programming to be outputted for a duration of time,	See col. 19 line 45 through col. 20 line 7 which discloses the passage of time.		Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
wherein only a portion of said duration contains at least a first	Column 19 line 67 to column 20 line 5.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated	See page 21 line 32 (especially page 25 line 23) through page 27 line 9 which discloses the passage of time.  Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	
Reference	Language	Reference	Language
<p>time interval of specific relevance, and</p> <p>wherein at least one of said first data and said video programming is received from</p>	<p>graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p> <p>Column 19 lines 35-41.</p>	<p>Page 451 line 3.</p> <p>Page 26 line 33 to page 27 line 7.</p> <p>Page 449 lines 13-35.</p>	<p>portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one remote transmitter station;		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.  Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.  The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
selecting and		Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
delivering said video programming to said at least one first output device for output to a user;		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a





Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
before		Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
a time period during which user specific information will be processed and		See col. 19 line 48 through col. 20 line 5 during which:		See page 24 line 2 through page 27 line 2 during which:	
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
delivering said first data to said computer;		Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that
generating second data to serve as a basis for delivering said user specific programming by processing at least		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
a first of said first data in said time period;		Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
communicating at least one of	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	
(i) at least a second of said first data and	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	
(ii) at least a first of said second data to said at least one first output device in said at least said first time interval of specific relevance	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...	
based on said step of generating; and	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs)	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			generate several graphic video overlays, ...	Page 451 lines 7-11.	and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
			and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
outputting said user specific programming, said user specific programming including said video programming and said at least one of said first data and said second data.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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<p>173. The method of claim 172, wherein said step of communicating includes selecting said at least one of (i) said at least said second of said first data and (ii) said at least said first of said second data</p> <p>based on said user specific information.</p>	Column 19 lines 64-66.	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...</p>	Page 26 lines 1-8.	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
	Column 19 lines 48-53.	<p>These signals instruct microcomputer, 205, to</p>	Page 23 line 35 to page 24 line 16.	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p>
		<p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p>	<p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p>	<p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		upon command.	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p>
174. The method of claim 173, wherein said only said portion of said duration includes a plurality of time intervals of specific relevance, said method further comprising the step of:	<p>Column 19 line 67 to column 20 line 5.</p> <p>Column 20 lines 5-7.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...</p> <p>... and [microcomputer, 205,] prepares to send the next locally generated graphic</p>	<p>Page 26 lines 8-11.</p> <p>Page 451 line 3.</p> <p>Page 26 line 33 to page 27 line 7.</p> <p>Page 27 lines 7-9 and</p>	<p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			overlay upon instruction from the originating studio.	Page 451 line 22 to Page 452 line 5.	to operate under control of received instructions.  Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.  In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synchronizations.
communicating at least a second of said first data and said second data in at least a second of said plurality of time intervals.	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."	
	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes
	generate several graphic video overlays, ...	Page 23 line 35 to page 24 line 16.  Page 451 lines 7-11.
	and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.
	upon command.	Page 44 lines 14-17.  Page 26 lines 20-28.



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
175. The method of claim 174, wherein said only said portion of said duration contains at least one time interval during which user specific programming is not to be outputted at said at least one output device, said method further comprising the step of:	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.		Page 27 lines 7-9 and  Page 451 line 22 to Page 452 line 5.	<p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>
ceasing to output said at	Column 20 lines 4-5.	... microcomputer, 205, ceases		Page 27 lines 4-7.	... causes microcomputer, 205, to cease

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
least one of (i) said at least said second of said first data and (ii) said at least said first of said second data before said at least one time interval.	Column 20 lines 5-7.	transmitting its own graphic to TV set, 202, ...  ... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 27 lines 7-9 and  Page 451 line 22 to Page 452 line 5.	overlying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.  Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.  Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.  In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synchronizing commands.	

176. The method of claim 175, wherein a	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks'	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>plurality of said second data are outputted at said at least one output device before</p> <p>said at least one time interval.</p>	Column 20 lines 5-7.	<p>performance ...</p> <p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>	<p>Page 27 lines 7-9 and</p> <p>Page 451 line 22 to Page 452 line 5.</p>	<p>subscriber's own portfolio performance ...</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>	
177. The method of claim 176, wherein at least one of second data	Column 20 lines 5-7.	<p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the</p>	Page 27 lines 7-9 and	<p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received</p>	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
is outputted at said at least one output device, after said at least one time interval.	Column 19 lines 48-53.	<p>originating studio.</p> <p>These signals instruct microcomputer, 205, to</p>	<p>Page 451 line 22 to Page 452 line 5.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language

	<p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>"program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command ...</p>
<p>178. The method of claim 172, wherein said at least one first output device includes</p>	<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p>

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language
a second output device, said method further comprising the step of:	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 446 lines 17-21.  Page 25 lines 33-34.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Then the host says, "And here is what your portfolio did."
outputting at said second output device at least one of (i) a portion of said user specific programming and	Column 19 lines 64-66.  Column 19 line 67 to column 20 line 5.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...  The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...	Page 26 lines 1-8.  Page 26 lines 8-11.  Page 451 line 3.  Page 26 line 33 to page 27 line 7.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.  As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(ii) information which explains a significance of said user specific programming.		Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	composite video and to commence transmitting the received composite video transmission unmodified.  Then the host says, "And here is what your portfolio did."
179. The method of claim 178, wherein said second output device outputs information which explains said significance of at least said portion of said user specific programming.		Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
180. The method of claim 179, wherein supplemental information is outputted that identifies information contained in said user specific programming by at least one of title and		Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
subject matter.	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 439 lines 14-15.  Page 420 line 32 to page 421 line 17.	<p>the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular A T&amp;T news item in a particular Transmit-A T&amp;T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said A T&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits,</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				an information segment that contains said AT&T news item, and an end of file signal.
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181. The method of claim 180, wherein said user specific programming includes at least one graphic image and audio describes subject matter contained in said at least one graphic image.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	

182. The method of claim 181, wherein said at least one graphic image is outputted at least one of said printer and a video monitor.	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

		viewer then sees a microcomputer generated graphic of his own stocks' performance ...		transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
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183. The method of claim 180, wherein at least a portion of said supplemental information is outputted at a speaker.	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...

184. The method of claim 183, further	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
comprising the step of: one of processing and outputting a digital television signal.			for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
185. The method of claim 172, further comprising the steps of: detecting at least a first control signal pertaining to said user specific programming before	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.  Page 34 line 35 to page 35 line 1.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  This base band signal is then transferred through separate paths to three separate detector devices.
display at said at least one output device of said video programming within said only a portion of said duration; and	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3.  Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
outputting at least a portion of said user	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,		Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
specific programming based on said at least said first control signal.			for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
186. The method of claim 185, wherein said first control signal is received from said at least one remote transmitter station, said method further comprising the step of:	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...		Page 25 line 33 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal instructs microcomputer, 205, ...
selecting at least a portion of said at least	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,		Page 26 line 4.  Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic

Claim Language	Support to parent application filed November 3, 1981.	Language	Reference	Support to instant specification.	Language
<p>one of said first data and</p> <p>said video programming based on said at least said first control signal.</p>	<p>Column 19 lines 39-41.</p> <p>Column 19 lines 17-23.</p>	<p>for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.</p> <p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 449 lines 13-20.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned</p>	<p>information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
				<p>determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				with said audio ...
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187. The method of claim 185, wherein at least a second control signal pertaining to said user specific programming is detected	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		These signals instruct microcomputer, 205,	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."

Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Support to instant specification. Reference	Language
		<p>to generate several graphic video overlays,</p> <p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p>	<p>Page 451 lines 7-11.</p> <p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>before at least part of the video programming contained in said at least said first time interval is displayed at said at least one output device, said method further comprising the step of:</p>	<p>Column 6 lines 48-50.</p> <p>Column 19 lines 67 to column 20 line 2.</p>	<p>This base band signal is then transmitted through separate paths to three separate detector devices.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 34 line 35 to page 35 line 1.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	<p>that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>	
	<p>Column 19 lines 46-48.</p>	<p>... several instruction signals are identified by decoder, 203, and <b>transferred</b> to microcomputer, 205.</p>	<p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8</p>		
<p>passing said at least said second control signal to said computer.</p>				<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be <b>transferred</b>; and to transfer said signals to said apparatus.</p>	
<p>188. The method of claim 187, wherein said</p>	<p>Column 19 lines 48-53.</p>	<p>These signals instruct microcomputer, 205, to</p>	<p>Page 23 line 35 to page 24 line 16.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program</p>	<p><i>12CR 357, Appendix A, Page 820 of 1288</i></p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at least one of (i) said at least said second of said first data and (ii) said at least said first of said second data is communicated to said at least one output device based on said at least said second control signal.				<p>originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
		generate several graphic video overlays, ...	Page 451 lines 7-11.	
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	
		upon command.	Page 44 lines 14-17.	
			Page 26 lines 20-28.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
189. The method of claim 188, wherein at least one of said second data is generated in accordance with said at least said second control signal, said method further comprising the step of:	Column 19 line 64 to column 20 line 1.  Column 19 lines 48-53.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  These signals instruct microcomputer, 205, to  generate several graphic video overlays, ...  and to transmit these overlays to TV set, 202,  <b>upon command.</b>	Page 26 lines 4-10.  Page 23 line 35 to page 24 line 16.  Page 451 lines 7-11.  Page 26 lines 4-8.  Page 44 lines 14-17.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 26 lines 20-28.	subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
detecting said at least said second control signal before the	Column 19 lines 46-48.	... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.		Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
end of said time period.	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.		Page 27 lines 7-9 and  Page 451 line 22 to	Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.  Furthermore, it is undesirable to separate

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language

			Page 452 line 5.	<p>computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synchronisms.</p>
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190. The method of claim 172, wherein said video programming is received from said at least one remote transmitter station, said method further comprising the step of:	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 436 line 9 to page 437 line 6.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects</i></p>
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Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	
Reference	Reference	Reference	Language
			<p><i>the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively,</p>
		<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 420 lines 21-29.</p>	
	<p>Column 18 lines 48-51.</p> <p>Several separate news services transmit news on different channels carried on the multi- channel cable transmission to converter boxes, <b>222</b> and <b>201</b>, and to signal processor, <b>200</b>.</p>		

Claim Language		Support to parent application: filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
programming said receiver station to process	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.		that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
digital data embedded in	See Fig. 6C.		See Fig. 7C.		The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
a signal containing said video programming.	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi- channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.		Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
191. The method of claim 190, wherein said receiver station performs at least one of said steps of generating and communicating	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
based on said step of programming.					retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
		Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
192. The method of claim 172, wherein said first data are received from said at least one remote transmitter station, said method further comprising the step of:		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)  Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
programming said receiver station to process		Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
digital data embedded in		See Fig. 6C.		See Fig. 7C.	
a signal containing said first data.		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Reference	Language	Language
193. The method of claim 192, wherein said receiver station performs at least one of said steps of generating and communicating	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
based on said step of	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
programming.			respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.		respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
194. The method of claim 172, further comprising the steps of: detecting at least a first discrete signal in a signal transmitted from said at least one remote transmitter station; and	Column 7 lines 6-11.  Column 3 lines 3-8.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.  The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 29 line 33 to page 30 line 5.  Page 14 line 32 to page 15 line 2.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.  The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
organizing information contained in said at least a first discrete signal with	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 30 lines 7-9.  Page 36 line 32 to page 37 line 3.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.  Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ....	
information contained in a second discrete signal in order to transfer	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 9 lines 57-63.</p>	<p>device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p> <p>The [controller, 20,] will control buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decrypter, 10, and processor or monitor, 12, as required, and to perform such other functions as buffer/comparator, 8, performs.</p>	<p>Page 146 line 31 to page 147 line 3.</p> <p>Page 258 lines 17-25.</p> <p>Page 260 lines 5-13.</p> <p>Page 147 lines 29-31.</p>	<p>capacity for controlling the operation of all elements of the signal processor ...</p> <p>Said failures to match cause the controllers, 20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to commence processing in the conventional fashion.)</p> <p>... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)").</p> <p>Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at least one microprocessor instruction.	Column 18 lines 58-62.	Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 149 lines 17-20.	Next said decrypt-a-00-header-message instructions cause controller, 20, to cause buffer/comparator, 8, to transfer to decryptor, 10, a quantity of signal words of said binary information of the second message ...
			Page 149 lines 27-29.	Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, ...
			Page 422 line 23 to page 423 line 10.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5. In due course, one instance of said Select-AT&T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30. Receiving said Select-AT&T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				programming.)
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195. The method of claim 194, wherein said at least one microprocessor instruction contains said information contained in said at least said first discrete signal	Column 19 lines 42-49.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  ... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 450 lines 31-32.  Page 21 lines 20-24.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	... caused his microcomputer, 205, to be preprogrammed as described above; ...  Microcomputer, 205, is preprogrammed to ... respond ... to instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
	Column 8 lines 20-27.	These signals instruct microcomputer, 205, ...  The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that	Page 37 line 26 to page 38 line 8.  Page 24 lines 5-6.  Page 33 lines 7-20.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
comprises assembling.			may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.		identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
	Column 8 lines 35-37.		[Controller, 20] can instruct buffer/comparator, 8, how to assemble signal words into signal units and join units together for further transfer and ...	Page 33 lines 18-20.  Page 37 line 31 to page 38 line 3.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...  Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...
				Page 39 lines 16-21.	Controller, 20, has capacity to preprogram (or reprogram) all said decoder apparatus, 27, 28, 29, 30, and 40; and thereby controls the fashions of detecting, correcting, converting, modifying, identifying, transferring, and other functioning of said decoders.
196. The method of claim 172, wherein said first data and said video programming are	Column 19 lines 35-37.		Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language
both received from said at least one remote transmitter station.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 18 lines 62-67.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
			Page 423 lines 11-13.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; .....



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
	and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.	Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...	Page 424 lines 2-9.	Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.
				Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A&T news item.)
				Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...
197. The method of claim 196, wherein said at least one remote transmitter station includes at least one intermediate transmitter	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of	

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
station, said method further comprising the step of:	<p>Column 10 line 14.</p> <p>Column 10 lines 24-28.</p>	<p><b>Method of Use at an Intermediate Transmission Point</b></p> <p>FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p>	<p>Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p> <p><b>Automating Intermediate Transmission Stations</b></p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p>
tuning at least one receiver to receive said at least one of said first data and said video programming.	Column 18 lines 62-67.	<p>In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel, and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.</p>	<p>Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark, .....</p> <p>Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&amp;T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...	Page 295 lines 6-8.  Page 439 lines 9-15.	link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...
198. The method of claim 196, wherein said receiver station is enabled to output said user specific programming based on a signal transmitted from said receiver station to said at least one remote transmitter station.	Column 15 lines 20-25.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 311 line 33 to page 312 line 8.  Page 293 lines 32-35.  Page 301 lines 6-9.  Page 308 line 35 to page 309 line 3.	And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information. And for example, the transmitted programming ...  At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....  ... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...  At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
199. A method of delivering user specific programming	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
at least one receiver station, each of said at least one receiver station including	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
a receiver,	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
at least one output device,				





Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
the steps of:		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
receiving at least		Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
one of video programming and		Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
said first data at at least		Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 12 lines 58-61.	converter boxes, 222 and 201, and to signal processor, 200.  The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.  ... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
a first transmitter station,		Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
said video programming to be displayed at said at least one output device for at least a duration of time, wherein		See col. 19 line 45 through col. 20 line 7 which discloses the passage of time.  Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	See page 21 line 32 (especially page 25 line 23) through page 27 line 9 which discloses the passage of time.  Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>only a portion of said duration of time is to include at least one time interval of specific relevance, and</p> <p>wherein said first data are to be processed at said at least one receiver station</p>	<p>Column 19 line 67 to column 20 line 5.</p> <p>Column 19 lines 39-41.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...</p> <p>[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.</p>	<p>Page 446 lines 17-21.</p> <p>Page 26 lines 8-11.</p> <p>Page 451 line 3.</p> <p>Page 26 line 33 to page 27 line 7.</p> <p>Page 449 lines 13-20.</p>	<p>predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference		Reference	
		Language		Language	
to generate said second data;	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
commencing to transfer said at least one of said video programming and said first data to at least a first transmitter at a first specific time; and	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
transmitting from said at least one transmitter station at least one information transmission including said at least one of said video programming and	Column 12 lines 45-46.  Column 19 lines 27-29.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...  ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 337 lines 3-10.  Page 445 line 24 to page 446 line 1.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station ...  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said first data.		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 446 lines 17-21.	predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T & T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
				Page 449 lines 13-26.	
200. The method of claim 199, further comprising the step of storing said at least one of said video programming and said first data		Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
		Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
before said first specific time.		Column 11 lines 28-31.	programming and other electronic data according to the methods described here		station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
			Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
201. The method of claim 200, further comprising the steps of: receiving said at least one of said video programming and said first data	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	
from a second transmitter station; and controlling at least one selective transfer device to communicate said at least one of said video programming and said first data to at least one of (i) a memory and (ii)	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.	

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language

said at least said first transmitter				
before said first specific time.	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.

202. The method of claim 201, wherein said at least one selective transfer device includes at least one of a switch and a processor.	Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.	... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,
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203. The method of claim 199, wherein said at least said first transmitter station transmits both of said video programming and said first data, said	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig.
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Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
method further comprising the step of:					6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
commencing to transfer the other of said video programming and	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.		Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
said first data to said at least said first transmitter at a second specific time.	Column 19 lines 45-46.  Column 19 lines 35-37.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.		Page 451 lines 6-7.  Page 449 lines 13-26.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
204. The method of claim 203, wherein said transmitter station transmits at least one of said first data before transmitting at least a portion of said video programming.	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.
	Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.
		Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)	
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	
205. The method of claim 204, wherein said second data are generated at said at least one receiver station before	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.
said at least said portion of said video programming is outputted at said at least one output device, said method further comprising the step of:	Column 20 lines 2-7.	When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 26 line 33 to page 27 line 9.
		And the Fig. 1C combining is displayed.	
		TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
		As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
transmitting at least one control signal which serves as a basis, at said at least one receiver station, for outputting at least a portion of said	Column 9 lines 47-57.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard	Page 248 line 17 to page 249 line 5.	<p>graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>
transmitting at least one control signal which serves as a basis, at said at least one receiver station, for outputting at least a portion of said	Column 9 lines 47-57.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard	Page 248 line 17 to page 249 line 5.	<p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that</p>





Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p>
		<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 19 lines 43-44.</p> <p>Column 19 line 64 to column 20 line 1.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 37 lines 26-28.</p> <p>Page 21 lines 23-24.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 lines 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			Page 451 line 3.	And the Fig. 1C combining is displayed.
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206. The method of claim 199, wherein said station outputs audio while outputting said video programming, said method further comprising the step of transmitting said audio.	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station ...
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming ...

207. The method of claim 206, wherein said audio explains a significance of at least a portion of said user specific programming, said method further comprising the step of:	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in

Support to parent application, filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
before transferring at least a portion of said video programming to said at least said first transmitter.	Column 19 lines 59-60.  Column 19 lines 67 to column 20 line 2.	recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.  Then the host says, "And here is what your portfolio did."  The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.  Then the host says, "And here is what your portfolio did."  And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
208. The method of claim 207, wherein said user specific information is outputted at said at least one output device while said at least said portion of said video programming is outputted at said at least one output device.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
209. The method of claim 208, wherein said audio explains a meaning of said user specific information.	Column 19 lines 59-60.  Column 19 line 67 to column 20 line 1.	Then the host says, "And here is what your portfolio did."  The viewer then sees a microcomputer generated graphic of his own stocks'	Then the host says, "And here is what your portfolio did."  TV monitor, 202M, then displays ... the microcomputer generated graphic of the

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		Language	

	performance ...		subscriber's own portfolio performance ...
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210. The method of claim 209, wherein said video programming and said audio are included in television programming, said method further comprising the step of transmitting a television signal.	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....  Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	

211. The method of claim 210, wherein at least one control signal enables said at least one receiver station to deliver said user specific programming at said at least one output device, said method further comprising the step of:	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
embedding said at least one control signal in at least one of said television signal and a multichannel signal containing said television signal.				Page 26 lines 4-11.	to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.		Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 9 lines 47-57.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.		Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
				Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Reference	Language
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	<p>predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder,</p>
			<p>Page 265 line 27 to Page 266 line 21.</p>	



Support to parent application filed November 3, 1981		Support to instant specification	
Claim Language	Reference	Language	Reference
		40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.  Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.  Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...  ... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.	
	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 250 lines 13-17.	
		Page 251 lines 8-11.	
		Page 263 lines 19-24.	
		Page 37 lines 26-28.	
212. The method of claim 211, wherein said at least one control signal causes said at least one receiver	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer	Page 26 lines 4-10.
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Reference	
		Language		Language	
<p>station to at least one of generate said second data and communicate said user specific information to said at least one output device.</p>			generated graphic of his own stocks' performance ...		monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
	<p>213. The method of claim 212, wherein said at least said first transmitter station includes a second transmitter station and said at least one control signal causes said second transmitter station to</p>	<p>Column 10 lines 24-28.</p>	<p>FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p>	<p>Page 324 lines 18-21.</p>	<p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p>
	<p>transfer said at least one of said television programming to</p> <p>a second transmitter.</p>	<p>Column 10 lines 40-47.</p> <p>Column 12 lines 45-46.</p>	<p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p> <p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...</p>	<p>Page 324 line 31 to page 325 line 4.</p> <p>Page 337 lines 3-10.</p>	<p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p> <p>In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...</p>
<p>214. The method of claim 213, wherein said second transmitter station is an</p>	<p>Column 10 lines 24-28.</p>	<p>FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable</p>	<p>Page 324 lines 18-21.</p>	<p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
intermediate transmitter station.	Column 10 lines 15-20.	television system "head end" transmission facility that cablecasts several channels of television programming.  The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	television programming.  The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.	Page 324 lines 8-17.	
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	Page 59 lines 29-33.	
			At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.	Page 25 line 34 to page 26 line 1.	
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
215. A method of delivering user specific programming	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
at least one receiver station, each of said at least one receiver station including	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
a receiver,	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
at least one output device,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	
a detector, and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
			Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...	
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.	
at least one processor operatively connected to said at least one output device, wherein each of said at least one receiver station is	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
adapted					graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
to detect first data and	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
generate second data, said second data to serve as a basis for	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
communicating user specific information, said method comprising the steps of:		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
receiving at least		Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
one of video programming and		Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
said first data at		Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
	Column 12 lines 58-61.	converter boxes, 222 and 201, and to signal processor, 200.	
at least a first transmitter station,		The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.
said video programming to be outputted at said at least one output device for at least a duration of time, wherein	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.
	See col. 19 line 45 through col. 20 line 7 which discloses the passage of time.		See page 21 line 32 (especially page 25 line 23) through page 27 line 9 which discloses the passage of time.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.
		separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200. ... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...	
		Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.	
		... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a	



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
<p>only a portion of said duration of time to include at least one time interval of specific relevance, and</p> <p>wherein said first data are to be processed at said at least one receiver station to</p>	<p>Column 19 line 67 to column 20 line 5.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...</p>	<p>Page 446 lines 17-21.</p> <p>Page 26 lines 8-11.</p> <p>Page 451 line 3.</p> <p>Page 26 line 33 to page 27 line 7.</p>	<p>predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p>	
	<p>Column 19 lines 39-41.</p>	<p>[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.</p>	<p>Page 449 lines 13-20.</p>		

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
generate said second data;	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...	
receiving at least a first control signal which operates at said at least said first transmitter station to communicate said at least one of said video programming and said first data to	Column 11 lines 39-43.  Column 11 lines 50-57.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.  ... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 lines 9-13.  Page 326 lines 28-30.  Page 328 line 22 to page 329 line 1.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
at least a first transmitter; and	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87,	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
transmitting from said at least one transmitter station at least one information transmission including said at least	Column 9 lines 47-57.	modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.		and 91, and channel combining and multiplexing system, 92.
		The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
		The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.  Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p>
			<p>Page 265 line 27 to Page 266 line 21.</p>	
		<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 250 lines 13-17.</p>	
			<p>Page 251 lines 8-11.</p>	



Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language

				(Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
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216. The method of claim 215, further comprising the step of: storing said at least one of said video programming and said first data in accordance with said at least	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
said at least one first control signal.	Column 11 lines 21-24.	Such input information might include the cable television system's complete	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language
		programming schedule, with each discrete unit of programming identified with a unique program code ...		of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
217. The method of claim 216, further comprising the step of: identifying said at least one of said video programming and	Column 11 lines 32-39.	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.</p> <p>By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	
said first data in accordance with	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
said at least one first control signal.	Column 11 lines 21-24.	programming and other electronic data according to the methods described here ...  Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...		Page 326 lines 30-33.	station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...  Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
218. The method of claim 216, further comprising the step of: controlling at least one selective transfer device to communicate said at least one of said video programming and said first data to at least one of (i) a memory and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.		Page 327 line 35 to page 328 line 13.  Page 84 lines 26-28.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	<p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
(ii) said at least said first transmitter	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 328 line 22 to page 329 line 1.</p>	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
in accordance with said at least one first control signal.	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.
			Page 84 lines 26-28.  Page 28 lines 26-27.  Page 49 lines 26-27.	
219. The method of claim 218, wherein said at least one selective transfer device includes at least one of a switch and a processor.	Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.	... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,
220. The method of claim 218, wherein said at least one first control signal includes a schedule.	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.  Page 326 lines 28-30.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>221. The method of claim 220, wherein said at least said first transmitter station transmits both of said video programming and</p> <p>said first data, said method further comprising the step of:</p>	<p>Column 12 lines 45-46.</p> <p>Column 19 lines 20-25.</p>	<p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 337 lines 3-10.</p> <p>Page 436 line 9 to page 437 line 6.</p>	<p>In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to</p> <p>Page 439 lines 9-15.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 420 lines 21-29.</p> <p>Page 449 lines 13-26.</p>	<p>receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific</p>
	<p>Column 18 lines 48-51.</p> <p>Column 19 lines 35-37.</p>	<p>Several separate news services transmit news on different channels carried on the multi- channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.</p>		

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

transmitting at least one of said first data before transmitting	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 337 lines 3-10.	fashions, the information of said item.)
	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
at least a portion of said video programming.	Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.

222.	The method of	Column 12 lines 45-46.	Beyond channel combining system and	Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94,
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Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			the microcomputer generated graphic of the subscriber's own portfolio performance And the Fig. 1C combining is displayed.
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223. The method of claim 215, further comprising the step of: transmitting audio in accordance with said at least said at least one first control signal.	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.

224. The method of claim 223, wherein said audio explains a significance of at least a portion of said user specific programming.	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks'	Page 451 line 3.	And the Fig. 1C combining is displayed.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
			performance overlay the studio generated graphic.	Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
225. The method of claim 224, wherein said at least one first control signal causes said at least said first transmitter station to transfer said audio from at least one of a switch and a memory to said at least said first transmitter.	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	... the programming schedule received earlier of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...	Page 328 lines 9-13.  Page 326 lines 28-30.  Page 328 lines 14-16.  Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.			
	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.			
226. The method of claim 215, wherein said video programming is	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.		Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

included in television programming, said method further comprising the step of:				programming ...
transmitting a television signal in accordance	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
with said at least one first control signal.	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.

227. The method of claim 226, wherein at least one instruction enables said at least one receiver station to deliver said user specific programming at said at least one output device, said method further comprising the step of:	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information,
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Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p>	<p>by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>
<p>embedding said at least one instruction in at least one of said television signal and a multichannel signal containing said television signal.</p>	<p>Column 19 lines 43-44.</p> <p>Column 9 lines 47-57.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Page 21 lines 23-24.</p> <p>Page 248 line 17 to page 249 line 5.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4; cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			<p>Page 257 line 24 to page 258 line 19.</p>	<p>said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>		<p>Page 257 line 24 to page 258 line 19.</p>	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
			<p>Page 265 line 27 to Page 266 line 21.</p>	<p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6,</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.		station that is a cable television system "head end" and that cablecasts several channels of television programming.
228. The method of claim 227, wherein said enables said at least one receiver station to identify at least said television programming.	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
	Reference	Reference
	Language	Language
		<p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
<p>229. The method of claim 228, wherein said at least one first control signal includes</p>	<p>Column 11 lines 3-5.</p>	<p>Page 439 lines 14-15.</p>
	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...</p>	<p>Page 325 line 34 to page 326 line 7.</p>
	<p>Column 11 lines 3-14.</p>	<p>Page 59 lines 29-33</p>
<p>229. The method of claim 228, wherein said at least one first control signal includes</p>	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the</p>	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders,</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification	
Reference	Language	Reference	Language
	<p>channel source of each signal, externally to code reader, 72. ...</p> <p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p>	<p>27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p> <p>Page 326 lines 16-18.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p> <p>Page 84 lines 26-28.</p>
<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.		
	Reference	Language	Reference	Language		
said at least one instruction.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 28 lines 26-27.	television or radio or other programming transmissions ...	... monitor information that identifies what programming is available, ...	
			Page 49 lines 26-27.		Meter-monitor segments contain meter information and/or monitor information.	
			Page 59 lines 29-33.		A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	
			Page 25 line 34 to page 26 line 1.		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.	
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.		The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	
230. The method of claim 215, wherein said at least said first transmitter is located	Column 9 lines 47-57.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20,		



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 257 line 24 to page 258 line 19.</p>	<p>controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the</p>

Claim Language	Reference	Language	Reference	Support to instant specification. Language
		<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p>	<p>predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at a second transmitter station, said method further comprising the steps of:	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	relevant detector or detectors, 34, 37, 38, 43, and 46.  Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
communicating said at least one first control signal to a second transmitter; and	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 328 lines 9-10.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
			Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
transmitting said at least said first control signal.	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 328 lines 9-10.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
			Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>231. The method of claim 230, wherein said at least one first control signal enables said second transmitter station to identify a programming signal, said method further comprising the step of:</p>	<p>Column 11 lines 32-39.</p>	<p>By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programing unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
<p>including at least a first identifier in said at least said first control signal.</p>	<p>Column 11 lines 21-24.</p>	<p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p>	<p>Page 326 lines 30-33.</p>	<p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and <b>embedded in</b> television or radio or other <b>programming transmissions</b> ...</p> <p>... <b>monitor information that identifies what programming is available</b>, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
transmitting said at least said second control signal.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			6, and page 90 lines 4-11.	
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233. The method of claim 232, wherein said programming signal contains at least one of said video programming and	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			Page 84 lines 26-28.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and <b>embedded in</b> television or radio or other <b>programming transmissions</b> ...</p>
			Page 28 lines 26-27.	... <b>monitor information that identifies what programming is available, ...</b>
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
said first data.		Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
234. The method of claim 233, wherein said at least one second control signal enables said second transmitter station to transmit said programming signal at a scheduled time, said method further comprising the step of:		Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.	... monitor information that identifies what



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
including at least one datum of said scheduled time in at least one of said at least said first control signal and said second control signal.	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6, ...
	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98,	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer,

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
235. A method of delivering customized programming at	Column 19 lines 67 to column 20 line 2.		Page 326 lines 28-30.
a receiver station, said receiver station including	Column 17 lines 47-53.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.  FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  ... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
a receiver,	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 451 line 3.  Page 26 lines 8-11.  Page 390 lines 30-35.  Page 396 lines 8-10.  Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a detector,		Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
a computer, and		Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
at least one output device, said method comprising the steps of:		Column 19 lines 64-66.  Column 19 lines 27-28.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...  ... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...	Page 26 lines 1-8.  Page 445 line 24 to page 446 line 1.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
receiving first data and		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
video programming,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
said video programming to be outputted for a duration of time,	See col. 19 line 45 through col. 20 line 7 which discloses the passage of time.		Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
wherein only a portion of said duration contains at least one time interval of specific relevance, and	Column 19 line 67 to column 20 line 5.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the	See page 21 line 32 (especially page 25 line 23) through page 27 line 9 which discloses the passage of time.  Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

Claim Language	Support to parent application, filed November 3, 1981.	Support to instant specification.	
Reference	Reference	Reference	Language
<p>at least one of said first data and said video programming is received from</p>	<p>studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p> <p>Column 19 lines 35-41.</p>	<p>Page 451 line 3.</p> <p>Page 26 line 33 to page 27 line 7.</p> <p>Page 449 lines 13-35.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
at least one remote transmitter station;	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.  Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.  Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
selecting and	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
delivering said video programming to said at least one output device	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
for output to a user;		"Wall Street Week."	Page 446 lines 17-21.	<p>of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
storing said first data	Column 19 lines 35-41.	<p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It <b>records</b> those prices that relate to the stocks in its stored portfolio.</p>	Page 449 lines 13-35.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
before		Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.	closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
a time period during which user information will be processed;		See col. 19 line 48 through col. 20 line 5 during which:		See page 24 line 2 through page 27 line 2 during which:	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
generating second data to serve as a basis for delivering said customized programming by processing at least		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
one of said first data in said time period;		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
communicating said second data to said at least one output device		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
in said at least one time interval of specific relevance based on			instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
said step of generating second data; and	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to		Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...		Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		and to transmit these overlays to TV set, 202,		Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.		Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command ...
outputting said customized programming, said customized programming including said video programming and said second data.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
236. An apparatus for coordinating a programming presentation at a mass medium programming receiver station comprising:	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a first receiver section for receiving mass medium programming at said mass medium programming receiver station;					displayed." But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs the microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	a first receiver section for receiving mass medium programming at said mass medium programming receiver station;	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
a first of a plurality of output devices		Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...	Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
		Column 19 lines 27-28.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...	Page 439 lines 9-15.  Page 445 line 24 to page 446 line 1.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...  ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
operatively connected to said first receiver section for outputting	Column 19 lines 15-20.	Signal processor, 200, receives this instruction from microcomputer, 205, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 288 lines 16-20.	145, to switch power on to monitor, 202M, ...  ... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.  In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st-and 3rd-new- program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5
			Page 435 lines 16-18.	
			Page 267 lines 20-28 from example #5.	
			Page 268 line 28 to page 269 line 12 from example #5.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 19 lines 20-29.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p> <p>Then, in a predetermined fashion, microcomputer, 205, may</p>	<p>Page 436 line 9 to page 437 line 6.</p>	<p>case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
			<p>Page 439 lines 9-15.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		<p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p> <p>and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p> <p>and tuner, 215, to tune appropriately to "Wall Street Week."</p> <p>Then the host says, "And here is what your portfolio did."</p>	<p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 25 lines 33-34.</p>	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then the host says, "And here is what your portfolio did."</p>
said mass medium programming;	Column 19 lines 59-60.			
a first processor operatively connected to said first receiver section for receiving from one of a remote station and	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.







Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Reference	Language
		<p>Then, in a predetermined fashion, microcomputer, 205, may</p> <p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p> <p>and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p> <p>and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor,</p>		

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
an instruct signal which is effective to control a specific fashion of coordinated presentation;	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	<p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-8.</p>	<p>202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Said signal is identified by decoder, 203;</p>
a second processor	Column 19 lines 63-66.	This signal is identified by decoder, 203,	Page 26 lines 1-8.	Said signal is identified by decoder, 203;

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
operatively connected to said second receiver section for controlling one of said plurality of output devices; and		and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
a second of said plurality of output devices operatively connected to said second processor for outputting coordinated	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
mass medium programming material.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		graphic.	
		shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
237. A method of delivering an individualized mass medium programming presentation	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 451 line 3. Page 390 lines 30-35.
a receiver for receiving a mass medium programming signal,	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 396 lines 8-10. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.
		... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. ... and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
	Reference	Language
a computer for processing and communicating information, and	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...
at least one output device operatively connected to said receiver and said computer for delivering to a user mass medium programming and computer information, and with	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."
said computer comprising at least one data storage location[s], said method comprising	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
the steps of:	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
receiving data to be processed	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer,

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
for presentation in coordination with a mass medium programming output;	Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>205, to record said datum or data in a predetermined fashion.</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting and receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
detecting an instruct-to-coordinate signal received from a remote station or	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by <b>decoder, 203</b> , and transferred via processor, 204, to	Page 25 line 33 to page 26 line 2..	<p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by <b>decoder, 203</b>; transferred to</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 37 line 26 to page 38 line 8.	microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred, and to transfer said signals to said apparatus.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
from a mass medium programming source,	Column 16 lines 43-47.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
			Page 320 lines 24-31.	Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said instruct-to-coordinate signal designating a plurality of one of input sources and	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	mark information, to signal processor, 131 ... ... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 449 lines 13-35.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
one of one output time and		Column 19 lines 64-66.		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
a location;		Column 19 lines 67 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
controlling a plurality of output devices to communicate mass medium programming, at least one of said received data to		Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
				Page 439 lines 9-15.	... to cause selected apparatus of said

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 449 lines 13-26.</p> <p>Page 449 lines 13-20.</p>	<p>station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ..</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one instruction which is effective to perform		Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
one of the functions of generating and outputting data for presentation with mass medium programming; and		Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
outputting to a user a coordinated presentation of mass medium programming and at least one locally pertinent datum, said coordinated presentation being outputted at said at least one output device as		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
one of at least one locally pertinent datum one of combined with and  output sequentially with mass medium programming, and  as at least one locally pertinent datum outputted at a first of said at least one output device concurrently with  mass medium programming outputted at a second of said at least one output device.	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...	
	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."	
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...	
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	
238. An apparatus for coordinating a programming presentation at a mass medium programming receiver station comprising:	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting and receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
				<p>the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
a first receiver section for receiving mass medium programming at said mass medium programming receiver station;	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....</p>
a first output device operatively connected to said receiver station for outputting said mass medium programming to a subscriber;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor,</p>



Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 446 lines 17-21.
a control signal detector operatively connected to said receiver section for	Column 15 lines 44-49.	Each decoder is likely to be located physically inside its associated player/recorder unit. Each is located at a point in the associated unit's circuitry where it receives every embedded signal on the programming channel or data channel to which the unit is tuned ...	Page 314 lines 31-33.  Page 315 lines 14-19.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.
	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.  Page 37 line 26 to page 38 line 8.
detecting the presence of a timing signal communicated from one of a remote station and		In the preferred embodiment, each one of said decoders is located at a point in the circuitry of its associated apparatus where said one receives (so as to detect all SPAM information on) the information of the selected frequency, channel or transmission to which its associated apparatus is tuned.  This base band signal is then transferred through separate paths to three separate detector devices.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a mass medium programming source;		Column 18 lines 48-55.		Page 26 line 4.  Page 420 line 21 to page 421 line 7.	retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal instructs microcomputer, 205, ...  Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200. Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message ... In due course, said remote news-service-A station ...
		Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.		Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a
a processor operatively connected to said control signal detector for		Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controlling a selected output device in response to an instruct-to-coordinate signal that designates at least one of a signal kind and	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
a device to control;	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
a second output device	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
operatively connected	Column 19 lines 63-64.	This signal is identified by decoder, 203,	Page 26 lines 1-2.	Said signal is identified by decoder, 203;

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
to said processor for			and transferred via processor, 204, to microcomputer, 205.	Page 37 line 26 to page 38 line 8.	transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
outputting selected mass medium programming material in response to a control signal,	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
said coordinated mass medium programming material being outputted at said receiver station with said mass medium programming.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
239. A method of delivering an individualized mass medium programming presentation	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		<p>generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence</p>	<p>Page 451 line 3.</p> <p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 26 lines 4-10.</p> <p>Page 445 line 24 to page 446 line 1.</p>
a receiver for receiving a mass medium programming signal,	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."			
a computer for processing and communicating information, and	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...			
at least one output device operatively	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on			

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
connected to said receiver and said computer for delivering to a subscriber mass medium programming and computer information, with			and tuner, 215, to tune appropriately to "Wall Street Week."		transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	said computer comprising at least one data storage location, said method comprising the steps of:	Column 19 line 64 to column 20 line 1.  Column 18 lines 65-67.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  ... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 446 lines 17-21.  Page 26 lines 4-10.  Page 426 lines 10-18.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
receiving a plurality a signals to be coordinated for		Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
presentation to a user;		<b>decoder, 203</b> , and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... <b>upon command</b> .			detected and converted into usable digital signals by <b>decoder, 203</b> , and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
	Column 19 lines 63-64.	This signal is identified by <b>decoder, 203</b> , and transferred via processor, 204, to		Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
				Page 26 lines 1-2.	Said signal is identified by <b>decoder, 203</b> ; transferred to microcomputer, 205; and ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			microcomputer, 205.	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
detecting the presence of an instruct-to-coordinate signal received from one of a remote station and	<i>In General</i> Column 6 lines 48-50.  Column 17 lines 39- 44.	This base band signal is then transmitted through separate paths to three separate detector devices.  Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.		<i>In General</i> Page 34 line 35 to page 35 line 1.  Page 15 lines 16-23.  Page 34 lines 24-26.  Page 44 lines 14-15.  Page 95 lines 18-21.	This base band signal is then transferred through separate paths to three separate detector devices.  The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...  ... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...  Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.
	<i>Specifically</i> Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to		<i>Specifically</i> Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
a mass medium programming source, said instruct-to-coordinate signal		Column 16 lines 43-47.	microcomputer, 205.	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 320 lines 24-31.	Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...
designating one of a specific coordinated presentation to output and		Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>a specific kind of mass medium programming to present;</p>	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-</p>	<p>subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	6, and page 90 lines 4-11.  Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
selecting mass medium programming to coordinate;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.          Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
selecting locally pertinent information to coordinate; and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.   Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference		Reference	
		Language		Language	
<p>outputting to a user a coordinated presentation of said selected mass medium programming and said selected locally pertinent information, with at least one of said selected mass medium programming and said selected locally pertinent information being selected the basis of</p> <p>one datum associated with said specific kind of mass medium programming, wherein</p> <p>said coordinated presentation is outputted at said at least one output device as one of (i) a combined and a sequential presentation of said locally pertinent information with</p> <p>(ii) said mass medium programming, and</p> <p>(iii) said locally pertinent information outputted at a first of said at least one output</p>	<p>Column 19 lines 67 to column 20 line 2.</p> <p>Column 19 lines 42-44.</p> <p>Column 19 lines 67 to column 20 line 2.</p> <p>Column 19 line 67 to column 20 line 1.</p> <p>Column 19 lines 59-60.</p> <p>Column 19 line 67 to column 20 line 1.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>Then the host says, "And here is what your portfolio did."</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p> <p>Page 21 lines 20-24.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p> <p>Page 26 lines 8-11.</p> <p>Page 25 lines 33-34.</p> <p>Page 26 lines 8-11.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p> <p>Then the host says, "And here is what your portfolio did."</p> <p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
device concurrently with said mass medium programming outputted at a second of said at least one output device.		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
240. A method of delivering a coordinated mass medium programming presentation	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described	Page 451 line 3. Page 390 lines 30-35.	And the Fig. 1C combining is displayed. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	





Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
receiving a plurality of signals to be coordinated for presentation to a subscriber, at least	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	subscriber station computers in commencing loading and running information for a particular combining.) ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
two of said plurality of signals containing different kinds	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 19 lines 46-48.	... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
of mass medium programming;		Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 37 line 26 to page 38 line 8	to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
detecting the presence of an instruct-to-coordinate signal received from a remote station or		Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 6 lines 48-50.</p> <p>Column 19 lines 31-34.</p>	<p>This base band signal is then transmitted through separate paths to three separate detector devices.</p> <p>FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>	<p>Page 26 line 4.</p> <p>Page 34 line 35 to page 35 line 1.</p> <p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>	<p>art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
from a mass medium programming source, said instruct-to-coordinate signal	Column 16 lines 43-47.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 320 lines 24-31.	microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...	
designating one of a specific coordinated output to device, and	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	
a specific kind of mass medium programming to present;	Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	
outputting first mass medium programming;	Column 19 lines 46-48.	... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 37 line 26 to page 38 line 8	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
selecting second mass medium programming		Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
in response to said detected instruct-to-coordinate signal; and		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
		Column 18 lines 52-55.	The news services precede each news	Page 420 line 32 to	Each remote station transmits each particular

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.</p> <p>Column 18 lines 58-62.</p>	<p>Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.</p>	<p>page 421 line 17.</p> <p>Page 422 line 23 to page 423 line 10.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular A T&amp;T news item in a particular Transmit-AT&amp;T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code" information of said A T&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p> <p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>In due course, one instance of said Select-AT&amp;T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said Select-AT&amp;T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
outputting to a user a coordinate presentation based on said first mass medium programming and	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
		generate several graphic video overlays, ...	Page 451 lines 7-11.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set, 202, upon command.	Page 26 lines 4-8.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language
said selected second mass medium programming,	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.	Page 26 lines 20-28.  Page 449 lines 13-20.	said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
said coordinated mass medium programming presentation being outputted at at least one of said plurality of output devices one of concurrently and sequentially	Column 20 lines 2-3.	When the two studio generated graphics are no longer displayed, ...	Page 27 lines 1-3.	Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head.
based on different	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV	Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Reference	Language
	<p>set, 202, when it is cablecast.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another</p>
<p>Column 19 lines 46-53.</p>		<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
kinds of mass medium programming.		Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 317 lines 2-6.	example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)  If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
241. A method of delivering an individualized mass medium programming presentation	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.	
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 451 line 3.  Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
a receiver for receiving a mass medium programming signal,		Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
a computer for processing and communicating information, and		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
at least one output device operatively connected to said receiver and said computer for delivering to a user mass medium programming and computer information, with		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
said computer comprising at least one data storage location, said method comprising the steps of:	Column 18 lines 65-67.	for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  ... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...  Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)  Page 426 lines 10-18.
receiving one of a plurality of timing signals and	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
a timing signal specifying a series of times;	<p>Column 18 lines 46-48.</p> <p>... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.</p> <p>Column 19 lines 35-41.</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p>		<p>Page 420 lines 3-6.</p> <p>Page 449 lines 13-35.</p>	<p>monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
detecting the presence of an instruct-to-coordinate signal received from one of a remote station and		Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.	telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
				Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
from a mass medium programming source,		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 26 line 4.	Said signal instructs microcomputer, 205, ...
				Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said instruct-to-coordinate signal designating one of a specific one of said plurality of timing signals and	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	221, in a predetermined fashion, to print said A&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A&T news item.)
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		generate several graphic video overlays, ...	Page 451 lines 7-11.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set,	Page 26 lines 4-8.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
				Said signal instructs microcomputer, 205, at

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		202,		the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command ...
a specific one of said series of times;	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 lines 34-35.	At this point, an instruction signal is generated at said program originating studio, ...
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-	The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
generating at a first controlled time at least one local output to be coordinated; and subsequently	<p>Column 19 lines 64-66.</p> <p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...</p> <p>These signals instruct microcomputer, 205, to</p> <p>Column 19 lines 48-53.</p> <p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p>	<p>6, and page 90 lines 4-11.</p> <p>Page 26 lines 1-8.</p> <p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p>
		<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
outputting to a subscriber at a second controlled time in the course of a mass medium programming presentation one of said at least one locally generated output,			upon command.	Page 44 lines 14-17.  Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
	outputting to a subscriber at a second controlled time in the course of a mass medium programming presentation one of said at least one locally generated output,	Column 19 line 67 to column 20 line 7.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 26 lines 8-11.  Page 451 line 3.  Page 26 line 33 to page 27 line 9.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.  As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.
				Page 451 line 22 to	Furthermore, it is undesirable to separate

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Reference	Language
<p>one of said first controlled time and</p>	<p>Column 19 lines 60-66.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	<p>page 452 line 5.</p> <p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p>
		<p>computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio-- eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Reference	Language
Language	Language	Reference
<p>said second controlled time being in response to said instruct-to-coordinate signal and</p>	<p>Column 19 line 67 to column 20 line 7.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>
		<p>forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate</p>
		<p>Page 26 lines 4-8.</p> <p>Page 26 lines 8-11.</p> <p>Page 451 line 3.</p> <p>Page 26 line 33 to page 27 line 9.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>said outputted locally generated output being outputted as a one of (i) a combined and</p> <p>(ii) a sequential output with said mass medium programming and at a first of said at least one output device concurrently</p>	<p>Column 19 lines 67 to column 20 line 2.</p> <p>Column 19 lines 59-60.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>Then the host says, "And here is what your portfolio did."</p>	<p>Page 451 line 22 to page 452 line 5.</p> <p>Page 451 line 3. Page 26 lines 8-11.</p> <p>Page 25 lines 33-34.</p>	<p>under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>Then the host says, "And here is what your portfolio did."</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
(iii) parallel outputs at a plurality of said at least one output devices.		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said A T & T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A T & T news item.)
242. A method of delivering an individualized mass medium programming presentation		Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
at a receiver station, said receiver station having				Page 451 line 3.	And the Fig. 1C combining is displayed.
		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration,	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a receiver for receiving a mass medium programming signal,		Column 19 lines 28-29.	first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.  ...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 396 lines 8-10.  Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  ... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
a computer for processing and communicating information, and		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
at least one output device operatively connected to said receiver and said computer for delivering to a user a mass medium programming and computer information, with		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said computer comprising at least one data storage location, said method comprising the steps of:		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	<p>audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&amp;T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&amp;T news item.)</p>
receiving one of a plurality of timing signals and		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
a timing signal specifying a series of times;	<p>Column 18 lines 46-48.</p> <p>... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p> <p>Column 19 lines 35-41.</p>		<p>Page 420 lines 3-6.</p> <p>Page 449 lines 13-35.</p>	<p>known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
detecting the presence of an instruct-to-coordinate signal received from one of a remote station and	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...		Page 25 line 33 to page 26 line 2.	closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.		Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 line 4.	Said signal instructs microcomputer, 205, ...
				Page 18 lines 24-27.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.
				page 450 line 27 to	(To accomplish all this has required only

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	page 451 line 11.
from a mass medium programming source,	Column 18 lines 65-67.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)	Page 426 lines 10-18.
said instruct-to-coordinate signal designating one of a specific one of said	Column 19 lines 64-66.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS	Page 26 lines 1-8.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
plurality of timing signals and	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.		
			Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")		
		generate several graphic video overlays, ...	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.		
		and to transmit these overlays to TV set, 202,	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.		
		upon command.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.		
			(Hereinafter, an instruction such as the above	Page 23 line 35 to page 24 line 16.	
				Page 451 lines 7-11.	
				Page 26 lines 4-8.	
				Page 44 lines 14-17.	
				Page 26 lines 20-28.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
a specific one of said series of times;	<p>Column 19 lines 59-60.</p> <p>Column 19 lines 60-62.</p>	<p>Then the host says, "And here is what your portfolio did."</p> <p>At this point, an instruction signal is generated in the television studio originating the programming ...</p>	<p>Page 25 lines 33-34.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p>	<p>signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p> <p>Then the host says, "And here is what your portfolio did."</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synchron command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>
generating at a first controlled time at least one local output to be coordinated; and subsequently	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 19 lines 48-53.	<p>These signals instruct microcomputer, 205, to</p> <p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>monitor, 202M.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language		Language
outputting to a user at at least one second controlled time in the course of a mass medium programming presentation a one of series of locally generated outputs,	Column 19 line 67 to column 20 line 7.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 26 lines 8-11.  Page 451 line 3.  Page 26 line 33 to page 27 line 9.   		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
one of said first controlled time and		Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient. In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
said second controlled time being in response to said instruct-to-coordinate signal and a portion of said series of locally generated outputs being outputted as		Column 19 line 67 to column 20 line 7.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphics. When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 26 lines 8-11.  Page 451 line 3.  Page 26 line 33 to page 27 line 9.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.  As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the

Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Reference	Support to instant specification. Language
one of (i) a combined and	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 22 to page 452 line 5.	<p>graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio-- eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(ii) a sequential output of locally generated information with said mass medium programming, and		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
		Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
	(iii) a parallel output at a first of said at least one output device concurrently with mass medium programming outputted at a second of said at least one output device.	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
243. A method of delivering a coordinated mass media programming presentation		Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 451 line 3. Page 390 lines 30-35.	generated graphic. And the Fig. 1C combining is displayed. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. ... and to tune monitor, 202M, in a predetermined fashion.	
at least one receiver for receiving a mass medium programming signal,	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....	
a computer for processing and communicating information, and	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...	
a plurality of output devices operatively connected to said at least one receiver and	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor,	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said computer for delivering  mass medium programming materials to a subscriber, said method comprising the steps of:				202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
	Column 18 lines 48-55.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
			Page 420 line 21 to page 421 line 7.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
receiving a plurality a signals to be coordinated for presentation to a user, at least		each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.		<p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station ...</p>
	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.	... and to tune monitor, 202M, in a predetermined fashion.
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Page 446 lines 17-21.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE"</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
two of said plurality of signals containing different			<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p>
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language
kinds of mass medium programming;				microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
	Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have	Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
detecting the presence of a plurality of instruct-to-coordinate signals, at least one instruct-to-coordinate signal received from one of a remote station and		sufficient apparatus to monitor every channel and kind of transmission it can receive.		apparatus to monitor every channel and kind of transmission it can receive.
	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 24 lines 5-6.  Page 451 lines 7-9.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
	Column 6 lines 48-50.  Column 19 lines 60-65.	This base band signal is then transmitted through separate paths to three separate detector devices.  At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203,	Page 34 line 35 to page 35 line 1.  Page 25 line 33 to page 26 line 2.	This base band signal is then transferred through separate paths to three separate detector devices.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer,

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
a mass medium programming source;			and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 37 line 26 to page 38 line 8.	205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Column 16 lines 43-47.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 26 line 4. Page 320 lines 24-31.	Said signal instructs microcomputer, 205, ... Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...
	performing in response to said at least one instruct-to-coordinate signal received from one of a remote station and a mass medium programming source	Column 19 lines 42-44.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.





Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 16 lines 47-50.	Prerecorded video cassettes and videodiscs could also contain unique embedded codes that would identify their usage (and could also transfer instructions to other external equipment).	<p>Page 321 lines 1-5.</p> <p>Page 476 lines 18-22.</p> <p>Page 473 lines 14-17.</p>	<p>Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming....</p> <p>...this method enables any subscriber who records the transmission of said programming at a recorder/player, 217, to access the embedded information of said instructions automatically in this fashion whenever the recorded transmission of said programming is played back....</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred....</p>
(1) selecting a receiver specific datum to process;	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Page 23 line 35 to page 24 line 16.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
(2) generating a locally datum to present;	Column 19 lines 60-66.	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	<p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				known in the art, to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		upon command.	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
(3) selecting a receiver specific output to communicate; and	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	<p>Page 25 line 33 to page 26 line 2..</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference		Reference	
		Language		Language	
					fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
(4) controlling at least one of said plurality of output devices; outputting to a user a presentation of mass medium programming and locally pertinent information,	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-8.		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
said presentation being in accordance with said at least one instruct-to-coordinate signal received from one of a remote station and a mass medium programming source, and	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			Page 451 line 3.	And the Fig. 1C combining is displayed.
	Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
	Column 16 lines 47-50.	Prerecorded video cassettes and videodiscs could also contain unique embedded codes that would identify their usage (and could also transfer instructions to other external equipment).	Page 321 lines 1-5.	Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming....
			Page 476 lines 18-22.	...this method enables any subscriber who records the transmission of said programming at a recorder/player, 217, to access the embedded information of said instructions

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
said mass medium programming and said locally pertinent information being outputted at said at least one of said plurality of output devices one of concurrently and sequentially.				Page 473 lines 14-17.	automatically in this fashion whenever the recorded transmission of said programming is played back....  At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred....  And the Fig. 1C combining is displayed.
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3.  Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."		Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
244. The method of claim 243, further comprising the steps of: receiving an information transmission from one of a remote station and	Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...		Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
a mass medium programming source, and detecting in said received transmission	Column 16 lines 43-47.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder,		Page 439 lines 9-15.  Page 320 lines 24-31.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...  Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So



Claim Language	Reference	Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.
one of:			31, identifies the embedded signals and transfers them to signal processor, 131.			playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...
(1) an instruct-to-select signal;	<i>In General</i> Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.		<i>In General</i> Page 15 lines 16-23.		The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...
				Page 34 lines 24-26.		... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...
				Page 44 lines 14-15.		A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...
				Page 95 lines 18-21.		Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.
	<i>Specifically</i> Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		<i>Specifically</i> Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.		Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(2) an instruct-to-generate signal;					information should be transferred; and to transfer said signals to said apparatus.
	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.		<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first</p>
		These signals instruct microcomputer, 205, to generate several graphic video overlays,		Page 451 lines 7-11.	

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
		<p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p> <p>transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all</p>		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(3) an instruct-to-output signal; and		Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,		subscriber station computers in commencing loading and running information for a particular combining.)
				Page 26 lines 1-8.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
(4) an instruct-to-output signal designating a specific device.		Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 37 line 26 to page 38 line 8.	monitor, 202M.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
245. A method of communicating subscriber station information from a user station to at least one remote data collection station, said method comprising the steps of:	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
(1) inputting a user reaction at a subscriber station;	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of		Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...		and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
(2) receiving at said user station information that	Column 20 lines 27-36.	Five minutes later,  a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.  This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Page 471 line 26 to page 472 line 17.		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
designates one of	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...  This signal instructs buffer/comparator, 8, ...	Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290, to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...  ... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
an instruct signal to process and	Column 20 lines 31.		Page 472 lines 15-17.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...
an output to deliver in consequence of user input;	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			Page 477 lines 8-17.	<p>that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p>
(3) determining the presence of said user input at said user station by processing said user reaction;	<p>Column 20 lines 31-33.</p> <p>Column 20 lines 26-27.</p> <p>Column 20 lines 23-26.</p>	<p>... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...</p> <p>... to hold and process further in a predetermined fashion.</p> <p>The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...</p>	<p>Page 472 lines 15-17.</p> <p>Page 471 lines 22-25.</p> <p>Page 471 lines 14-21.</p>	<p>... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
(4)	processing	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 21-26.	the signal processor, 200, of said station.  In a fashion described more fully below, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10.  Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decrypt techniques, well known in the art, to decrypt said signals as required. Decryptor, 10, transfers decrypted signals to controller, 12.
	an instruct signal which is effective to	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
	start a predetermined coordination sequence at said user station	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 472 lines 13-15.  Page 31 lines 10-22.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...  Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<p>Column 20 line 11.</p> <p>Column 20 lines 31-37.</p>	<p>Coordinating Print and Video</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.</p>	<p>See generally page 469 line 1 to page 516 line 13. (Page 469 lines 1-2 quoted herein.)</p> <p>Page 471 line 26 to page 472 line 17.</p>	<p>information to buffer/comparator, 14.</p> <p><b>Automating U. R. Stations ... Examples #9 and # 10 Continued</b></p> <p><b>Coordinating Computers, Television, and Print</b></p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p>	
			<p>476 line 34 to page 477 line 8.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in consequence of said step of determining; and				Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
				Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
(5) transferring from said user station to at least one remote data collection station an indication		Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving what programming information that identifies what programming is available; what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
confirming one of delivery of said instruct signal from said step of processing and	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	
	Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.	
	Column 20 lines 45-46.	... and all necessary equipment was enabled.	Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
246. The method of claim 245, wherein said processed instruct signal is input by a local user, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language
	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
storing a user instruction to receive at least one specific	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
mass medium program,	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said

Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Reference	Support to instant specification. Language
			<p>Page 477 lines 8-17.</p>	<p>second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p>
datum,	Column 9 lines 47-57.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	<p>Page 248 line 17 to page 249 line 5.</p>	
			<p>Page 257 line 24 to page 258 line 19.</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Controller, 20, has capacity for keeping a track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping a track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 250 lines 13-17.</p>	<p>of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.</p>
				<p>Page 251 lines 8-11.</p>	<p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p>
				<p>Page 263 lines 19-24.</p>	<p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p>
				<p>Page 37 lines 26-28.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p>
news item, or		<p>Column 18 lines 52-55.</p>	<p>The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.</p>	<p>Page 420 line 32 to page 421 line 17.</p>	<p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular A T&amp;T news item in a particular Transmit-A T&amp;T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said A T&amp;T news item and subject matter information of said binary</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
computer control instruction; and	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.		Page 428 lines 21-26.	information of "T", appropriate padding bits, an information segment that contains said A T & T news item, and an end of file signal.  The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
receiving at least one specific mass medium program,	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.		Page 473 lines 3-13.  Page 477 lines 12-17.  Page 477 lines 23-29.  Page 478 lines 1-5.  Page 475 lines 1-2.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...  ... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....  ... causes ... said decoder, 290, to detect and process properly the information of said second message.  (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)  Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
datum,	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 30 lines 7-9.
news item, or	Column 18 lines 58-67.	Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205. In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel, and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.	<p>Page 36 line 32 to page 37 line 3.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ...</p> <p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>In due course, one instance of said Select-AT&amp;T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said Select-AT&amp;T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p> <p>Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station</p>
			Page 422 line 23 to page 423 line 13.
			Page 267 lines 20-28 from example #5.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Language
		<p>Page 424 lines 3-9.</p>	<p>receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>... causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program- Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&amp;T news item. (Said preprogrammed</p>
	<p>Page 435 lines 16-25.</p>	<p>Page 437 lines 1-6.</p>	
	<p>Page 426 lines 10-18.</p>		

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
computer control instruction in accordance with said user instruction.	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...			instructions entered by the subscriber might cause said microcomputer, for example, then ... to cause said unit, 256, to record said A T & T news item.)
				Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
				Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
247. The method of claim 245, wherein said processed instruct signal is input by a remote user, said method further	Column 19 lines 42-44.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.		Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
comprising the steps of:		Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
	storing a user instruction to one of	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
	process and	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ...
		Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 472 lines 13-15.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...
				Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...
				Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
present at least one mass medium program,	Column 20 lines 46-49.	<p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p> <p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p> <p>When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.</p>	<p>Page 282 line 2 to page 283 line 33.</p> <p>Page 478 lines 1-5.</p> <p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p>	<p>preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ....</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... <b>generate-recipe</b>... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ...</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 477 lines 23-29.	said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 478 lines 1-5.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
				(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
datum,	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
news item, or	Column 18 lines 56-58.	... signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.	Page 420 lines 6-20.	The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".
			Page 422 lines 33 to Page 423 line 4.	...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	<p>information of "T" that is among the news-items-of-interest information....</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular AT&amp;T news item in a particular Transmit-AT&amp;T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p>
computer control instruction in a specific fashion; and	Column 18 lines 58-62.	Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 422 line 23 to page 423 line 10.	<p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>In due course, one instance of said Select-AT&amp;T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said Select-AT&amp;T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5)</p>
			Page 267 lines 20-28 from example #5.	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
performing one of the functions of processing and presenting at least one specific mass medium program,					and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...
				Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
				Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
				Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
datum,		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a	Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
				Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
news item, or	Column 18 lines 62-67.	<p>digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p> <p>In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel, and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.</p>	<p>Page 423 lines 11-13.</p> <p>Page 424 lines 2-9.</p>	<p>transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T &amp; T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark, .....</p> <p>Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Language
computer control instruction in accordance with said instruction.	Column 18 lines 58-62.	<p>Page 426 lines 10-18.</p> <p>Page 422 line 23 to page 423 line 10.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&amp;T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&amp;T news item.)</p> <p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>In due course, one instance of said Select-AT&amp;T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said Select-AT&amp;T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-radio-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
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248. The method of claim 12, wherein said information that designates one of a specific user input and said instruct signal is detected in an information transmission from one of data and a programming source, said method further comprising the steps of:	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
programming a processor to respond to information communicated from one of data and a programming source;	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
receiving an information transmission from one of data and a programming source;	<p>Column 9 lines 33-40.</p> <p>Column 20 lines 16-19.</p>	<p>Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.</p> <p>Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.</p>	<p>Figs. 2A-2C. Page 35 lines 1-6.</p> <p>Page 35 lines 16-18.</p> <p>Page 35 lines 27-30.</p> <p>Page 36 lines 1-3.</p> <p>Page 36 lines 18-20.</p> <p>Page 37 lines 26-28.</p> <p>Page 470 lines 1-3 and</p> <p>Page 470 lines 9-12.</p>	<p><i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.</p> <p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					above, apparatus is caused to receive the particular transmission of said program that is ...
				Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
				Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
				Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
				Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
				Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
				Page 472 lines 4-12.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
249. A method of controlling a remote intermediate data transmitter station to communicate an instruct signal to at least one receiver station, with said remote intermediate transmitter station including	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 324 lines 18-21.  Page 324 lines 8-17.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.  The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the
one of a broadcast and a cablecast transmitter,	Column 10 lines 24-28.  Column 10 lines 15-20.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.  The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the			

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>a plurality of selective transfer devices each operatively connected to said one of a broadcast and a cablecast transmitter,</p> <p>a data receiver for receiving said instruct signal from at least one origination station,</p>	Column 10 lines 41-43.	<p>operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.</p> <p>... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...</p>	<p>operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.</p> <p>... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,</p>	Page 324 line 34-35.	
	Column 10 lines 30-39.	<p>The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>	Page 324 lines 23-31.	
	Column 4 lines 26-28.	<p>Signals may also be transmitted on frequencies outside the ranges of television and radio.</p>	<p>In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming...</p> <p>(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an</p>	<p>Page 14 lines 15-17.</p> <p>Page 463 lines 10-29.</p>	



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>a control signal detector, and one</p> <p>of a controller and a computer capable of controlling</p> <p>at least one of said selective transfer devices, and with said remote intermediate transmitter station adapted to</p> <p>detect the presence of at least one control signal,</p>	<p>Column 19 lines 43-44.</p> <p>Column 11 lines 3-5.</p>	<p>... instruction signals embedded in the "Wall Street Week" programing transmission.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programing and ...</p>	<p>Page 21 lines 23-24.</p> <p>Page 325 line 34 to page 326 line 7.</p> <p>Page 59 lines 29-33</p>	<p>absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p>A SPAM message is the modality whereby the original transmission station that originates</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
to control the communication of said instruct signal	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ....
	Column 6 lines 50-53:	These separate detectors are designed to act on the particular frequency ranges in which the encoded information may be found.	Page 59 lines 29-33	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
				A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 35 lines 1-4.	The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
in response to said at least one control signal, and	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>to deliver at said one of a broadcast and a cablecast transmitter said instruct signal, said method comprising the steps of:</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 lines 14-16.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
receiving said instruct signal to be transmitted by said remote intermediate data transmitter station and	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.  Page 25 lines 34-35.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	that output of matrix switch, 75, that outputs to modulator, 87.  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, ...  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
delivering said instruct signal to at least one origination transmitter, said instruct signal being effective at said receiver station to	Column 19 lines 62-63	... and [the instruction signal] is transmitted in the programming transmission.	Page 25 line 34 to page 26 line 1.	... an instruction signal is ... embedded in the programming transmission, and transmitted.
start a predetermined coordination sequence;	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 25 line 33 to page 26 line 2..  Page 37 line 26 to page 38 line 8.	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38,

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 19 lines 48-53.</p> <p>These signals instruct microcomputer, 205, to</p> <p>generate several graphic video overlays, ...</p>		<p>Page 26 lines 4-8.</p> <p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p>	<p>43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.		
Reference	Language	Reference	Language	Language
		<p>and to transmit these overlays to TV set, 202,</p> <p><b>upon command.</b></p>	<p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
<p>receiving at said at least one control signal which at said remote intermediate data transmitter station operates to control the communication of said instruct signal; and</p>	<p>Column 19 lines 60-62.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming ...</p>	<p>Page 59 lines 29-33.</p> <p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
	<p>Column 11 lines 38-43.</p> <p>By comparing identification signals on the incoming programming with the local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73,</p>
	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
	Language	Language
	switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule. information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
transmitting said at least one control signal from said at least one origination transmitter	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	By comparing identification signals on the incoming programming ...	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

before a specific time.	Column 11 lines 28-31.	Such input information might also indicate <b>when</b> and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, <b>93</b> .	Page 84 lines 26-28.	information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected <b>meter-monitor information of said message information</b> with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 28 lines 26-27.	SPAM signals are generated at original transmission stations or intermediate transmission stations and <b>embedded in</b> television or radio or other <b>programming transmissions</b> ...
			Page 49 lines 26-27.	... <b>monitor information that identifies what programming</b> is available, ...
			Page 326 line 33 to page 327 line 2.	Meter-monitor segments contain meter information and/or monitor information.  Such input information can indicate <b>when</b> and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...

250. The method of claim 249, further comprising the step of embedding one of	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
said at least one control	Column 11 lines 38-39.	By comparing <b>identification signals on</b>	Page 327 line 35 to	Computer, 73, monitors incoming

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
signal in			the incoming programming ...	page 328 line 13.	programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
an information transmission containing said instruct signal.	Column 19 lines 43-44.		... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
251. The method of claim 249, wherein said specific time is a scheduled time of transmitting one of said	Column 11 lines 38-43.		By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
instruct signal and information associated with said instruct signal from said remote intermediate data transmitter station.			when and on what channel or channels the head end facility should transmit the programming.		<p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
				Page 84 lines 26-28.	
				Page 28 lines 26-27.	
				Page 49 lines 26-27.	
252. A method of controlling a receiver station including the steps of:	Column 10 line 64 to column 11 line 3.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.		Page 325 lines 17-27.	<p>In line between each of the aforementioned receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54,</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 324 line 31 to page 325 line 2.	55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.  Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, ...
detecting one of the presence and		Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
		Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
absence of		Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
one of a broadcast cablecast		Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.		
Reference	Reference	Reference	Reference	Language
	<p>Column 8 line 68 to column 9 line 4.</p>	<p>Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.</p>	<p>Page 258 lines 10-19.</p>	<p>channel in the predetermined television channel selection pattern: wireless channel 5.</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
<p>controlling said processor to output specific information in response to said step of inputting; and</p>	<p>Column 9 lines 53-57.</p>	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
starting a predetermined coordination sequence on the basis of information received from said processor					and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.
		This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.		Page 250 lines 13-17.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.
				251 lines 8-11.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...
				Page 263 lines 19-24.	... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.
				Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to		Page 25 line 33 to page 26 line 2..	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
based on said step of controlling.	<p>Column 19 lines 48-53.</p> <p>These signals instruct microcomputer, 205, to</p>	<p>microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-8.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a</p>

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
		Reference	Language

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Reference	Language	Language
	<p>controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.</p>	<p>which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.</p>
		<p>Fig. 3A shows one such preferred controller, 39.</p> <p>One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series. Buffer, 39A, and processor, 39B, are the first buffer and processor of the series and perform the forward error correcting functions of controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. Buffer, 39E, and control processor, 39J, are the third buffer and processor. All controlled functions invoked at controller, 39, by received SPAM signals are invoked at control processor, 39J.</p>
		<p>As Fig. 3A shows, each processor, 39B, 39D, and 39J, has associated RAM and ROM and, hence, constitutes a programmable controller in its own right.</p>
<p>bypassing said buffer and inputting said instruct-to-react signal directly to said processor.</p>	<p>Column 8 lines 62-65.</p>	<p>Page 156 line 33 to page 157 line 10.</p>
	<p>The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.</p>	<p>Page 157 line 34 to page 158 line 1.</p>
		<p>Page 157 line 34 to page 158 line 1.</p>
	<p>Column 8 lines 62-65.</p>	<p>Page 251 lines 3-8.</p>
		<p>Page 253 lines 10-11.</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
	<p>Column 8 line 68 to column 9 line 4.</p> <p>Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.</p>	<p>Page 253 lines 19-22.</p> <p>Page 258 lines 10-19.</p> <p>Page 254 line 23 to page 255 line 3.</p>	<p>Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>... information and transmit it to digital detector, 34; causing digital detector, 34, to detect the binary information of said signal information and transfer said binary information to controller, 39. Receiving said binary information at controller, 39, causes the binary SPAM information of the wireless channel 5 transmission to be checked and corrected, as necessary, at processor, 39B; converted into locally usable binary information at processor, 39D; and checked for end of file signal information at EOFs valve, 39F, and transmitted to the null output of matrix switch, 39I, until EOFs valve, 39F, detects an end of file signal. ... In due course, said EOFs valve, 39F, receives the aforementioned end of file signal causing said valve, 39F, to detect said signal and transmit the aforementioned interrupt signal of EOFs-signal-detected information to said control processor, 39J. Receiving said EOFs-signal-detected ...</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
		<p>In due course said remote wireless station transmits the end of file signal that terminates said information segment, and the EOFs valve, 39F, of decoder, 30, receives and detects said signal, in its end of file detecting fashion, causing said valve, 39F, to transmit the aforementioned EOFs-signal-detected information to said control processor, 39J. Just as applied in the case of the 2nd command (#5), receiving said EOFs-signal-detected information causes control processor, 39J, to cause EOFs valve, 39F, to discard all information of said end of file signal; to cause said matrix switch, 39I, to cease transferring SPAM message information from said EOFs valve, 39F, to its null output information and commence transferring SPAM message information from said valve, 39F, to said control processor, 39J; then to cause EOFs valve, 39F, to recommence processing inputted signal words in its preprogrammed fashion and transferring said words to matrix switch, 39I; and to commence waiting to receive from said switch, 39I, the binary information of a subsequent SPAM header.</p> <p>Subsequently, said remote wireless station transmits the second combining synch command of the "Wall Street Week" program. (Hereinafter, said command may be called the "3<sup>rd</sup> command (#5).")</p>
		<p>Page 259 lines 3-29.</p>
		<p>In due course said remote wireless station transmits the end of file signal that terminates said information segment, and the EOFs valve, 39F, of decoder, 30, receives and detects said signal, in its end of file detecting fashion, causing said valve, 39F, to transmit the aforementioned EOFs-signal-detected information to said control processor, 39J. Just as applied in the case of the 2nd command (#5), receiving said EOFs-signal-detected information causes control processor, 39J, to cause EOFs valve, 39F, to discard all information of said end of file signal; to cause said matrix switch, 39I, to cease transferring SPAM message information from said EOFs valve, 39F, to its null output information and commence transferring SPAM message information from said valve, 39F, to said control processor, 39J; then to cause EOFs valve, 39F, to recommence processing inputted signal words in its preprogrammed fashion and transferring said words to matrix switch, 39I; and to commence waiting to receive from said switch, 39I, the binary information of a subsequent SPAM header.</p> <p>Subsequently, said remote wireless station transmits the second combining synch command of the "Wall Street Week" program. (Hereinafter, said command may be called the "3<sup>rd</sup> command (#5).")</p>
<p>254. The method of claim 252, wherein said processor processes a datum designating one of a television channel and a television program, said method further having one step</p>	<p>Column 19 lines 17-23.</p>	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>
	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
of the group consisting of:			Page 436 line 9 to page 437 line 3.	<p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
controlling a tuner to tune a receiver to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
<p>receive one of the television channel and the television programming designated by said processed datum;</p>	<p>Column 19 lines 23-25.</p>	<p>and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Page 446 lines 17-21.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a selective transmission device to input to a control signal detector at least a portion of one of the television channel and the television programming designated by said processed datum;		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
		Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
				Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...





Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
the television programming designated by said processed datum;	Reference	Reference	Language
	<p>Column 19 lines 46-53.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another</p>
		<p>Page 23 line 35 to page 24 line 16.</p>	
		<p>Page 44 lines 14-17.</p>	
		<p>Page 26 lines 20-28.</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Reference	Language
	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p>
	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks'</p>			



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>	<p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p>
<p>controlling a selective transfer device to communicate to one of a storage device and a television monitor one of the television channel and the television programming designated by said processed datum.</p>	<p>Column 19 lines 23-29.</p>	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 437 lines 1-6.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			<p>... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>	
			<p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	

<p>255. The method of claim 252, wherein said processor processes a datum designating at least one specific channel of one of a</p>	<p>Column 19 lines 17-23.</p>	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to</p>
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Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>multichannel cable and a broadcast signal, said method further having one step of the group consisting of:</p>	<p>Column 6 lines 23-26.</p>	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p>	<p>Page 439 lines 14-15.</p> <p>Page 29 lines 4-7.</p>	<p>the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p>
<p>controlling a tuner to tune a converter to receive the</p>	<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at least one specific channel designated by said processed datum;	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 446 lines 17-21.  Page 437 lines 1-6.	decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;  ...  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...  ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;  ...
	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 295 lines 6-8.  Page 439 lines 9-15.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 11 lines 5-10.	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a selective transfer device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
a control signal detector at least a portion of the	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 446 lines 17-21.  Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at least one specific channel designated by said processed datum;	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 24 lines 5-6.  Page 451 lines 7-9.	and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 34 line 35 to page 35 line 1.  Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	This base band signal is then transferred through separate paths to three separate detector devices.  Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a control signal detector to search for at least one of said control signals in the	Column 17 lines 28-33.	... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)	Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one specific channel designated by said processed datum;		Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record.	Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a selective transmission device to		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
input to a computer said control signals detected in the		Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,	Page 21 lines 23-24.  Page 451 lines 6-7.	... instruction signals embedded in the "Wall Street Week" programming transmission.  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one specific channel designated by said processed datum;			several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			These signals instruct microcomputer, 205, ...	Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
	Column 19 lines 1-4.		In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a computer to respond to said control signals	Column 19 lines 42-44.		Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	loading and running information for a particular combining.)  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
		The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one specific channels designated by said processed datum;	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.		Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a television monitor to display one of video and audio contained in the	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
at least one specific channel designated by said processed datum;	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.		Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a video recorder to one of record and play one of video and audio contained in the	Column 19 lines 23-27.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...		Page 437 lines 1-6.	"programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
					Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
					Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
					... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
					... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....
at least one specific channels designated by	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to		Page 445 lines 24-27.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
					Fig. 7C illustrates methods for monitoring multiple programming channels, selecting



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said processed datum; and			monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 11 lines 5-10.	programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
controlling a selective transfer device to communicate to one of a storage device and an output device the	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.  Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...  ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;  ... instructions causes controller, 20, ... to switch power on to video recorder/player, 217,  ... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
				Page 295 lines 6-8.	
				Page 439 lines 9-15.	
				Page 445 lines 24-27.	
				Page 446 lines 18-23.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one specific channel designated by said processed datum.				Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ... ... and to tune monitor, 202M, in a predetermined fashion.
				Page 445 line 35 to page 446 line 1.	
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.		Page 419 line 34 to page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
				Page 11 lines 5-10.	
256. A method of controlling	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it		Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
				Page 37 line 26 to page	In each decoder, the controller, 39, 44, or 47,

Claim Language	Support to parent application filed November 3, 1981	Language	Reference	Support to instant specification	Language
a receiver station, said receiver station having	Column 17 lines 47-53.	<p>receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types</p>	<p>38 line 8.</p> <p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 390 lines 30-35.</p>	<p>receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
a processor for	Column 6 lines 23-26.	of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.	such as television or radio is displayed to persons.
passing and	Column 7 lines 47-49.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
executing instructions and	Column 7 lines 50-58.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:	Column 7 lines 60-64.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 10-18.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
receiving one of a broadcast and a cablecast transmission;	Column 6 lines 30-41.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
		The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are		Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
		The cable transmission is input simultaneously to switch, 1, and mixer, 2. The broadcast transmission is input to switch, 1. Switch, 1, and mixers, 2 and 3, are	Page 29 lines 15-26.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.		all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
demodulating said one of said broadcast and said cablecast transmission to detect an information transmission thereon,	Column 6 lines 45-48.	The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.	Page 34 lines 31-35.	The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.
said information transmission comprising an instruct signal which is	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
effective to start a predetermined coordination sequence;		Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	Page 25 line 33 to page 26 line 2..	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205,

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>detecting said instruct signal on said information transmission and passing said instruct signal to said processor;</p>	<p>Column 6 lines 48-50.</p>	<p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p> <p>This base band signal is then transmitted through separate paths to three separate detector devices.</p>	<p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 34 line 35 to page 35 line 1.</p>	<p>evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	Column 7 lines 6-11.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.	Page 29 line 33 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.	
	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
delaying, under processor control, the passing of said instruct signal to a controllable apparatus;	Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.	
passing said instruct signal to said controllable apparatus	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
on the basis of said timing signal; and	Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, 14.	Page 33 lines 18-20.  Page 149 lines 8-15.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...  Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular	



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	Column 8 lines 56-58. See Fig. 1.	To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus.	For example, page 150 lines 29-35.  For example, page 152 line 19 to page 153 line 1.	<p>transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, to execute particular preprogrammed transfer- and-meter instructions ...</p> <p>Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message under control of said transfer-and-meter instructions commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions. Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p> <p>Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controlling said controllable apparatus based on said instruct signal.	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.  Page 451 line 3.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
257. A method of controlling at least one of a plurality of	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  Fig. 7 exemplifies one embodiment of an

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiver stations each of which			configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
includes one of a broadcast and a cablecast mass medium programming receiver,	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.		Page 396 lines 8-10.  Page 29 lines 4-15.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.  Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
at least one output device,	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		Page 470 lines 1-3 and  Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
a control signal detector,	Column 6 lines 50-53.	These separate detectors are designed to act on the particular frequency ranges in which the encoded information may be found.		Page 470 lines 19-21.  Page 35 lines 1-4.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.  The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>at least one processor capable of responding to an instruct signal,</p> <p>and with each said mass medium programming receiver stations adapted to detect and respond to said instruct signal, said method comprising the steps of:</p>	Column 20 lines 31-33.	<p>... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...</p> <p>This base band signal is then transmitted through separate paths to three separate detector devices.</p> <p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.</p>	<p>Page 472 lines 15-17.</p> <p>Page 34 line 35 to page 35 line 1.</p> <p>Page 31 lines 10-14.</p>	<p>may be found.</p> <p>... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.</p>	
	Column 10 lines 30-39.	<p>The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p>	Page 324 lines 23-31.	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>	
	Column 4 lines 5-6.	<p>These techniques employ signals embedded in programs.</p>	Page 13 lines 25-26.	<p>The present invention employs signals embedded in programming.</p>	
start a predetermined coordination sequence and	Column 19 lines 60-66.	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs</p>	Page 25 line 33 to page 26 line 2..	<p>Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p>	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>microcomputer, 205, to transmit the first overlay to TV set, 202, ...</p> <p>Column 19 lines 48-53.</p>		<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-8.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
delivering said instruct signal to a transmitter;		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
(2) receiving at	Column 10 lines 30-39.	The facility receives programming from	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
		The station receives programming from many	Page 324 lines 23-31.	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language		Reference	Language
said one of said broadcast and said cablecast transmitter station at least one control signal		many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.			sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
	which at the receiver station operates to communicate the instruct signal to said at least one processor; and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
(3) transferring said at least one control signal to the transmitter, said transmitter transmitting the instruct signal and the at least one		Examples of signal units are a unique code identifying a programming unit, ...		Page 14 lines 27-29.	Examples of signal units are a unique code identifying a programming unit, ...
		Column 2 lines 65-66.  Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
control signal.		Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
258. The method of claim 257, wherein one of said instruct signal and an identification data in respect of said instruct signal is embedded in one of a television signal and a signal containing a television program.		Column 20 lines 27-29.  Column 4 lines 5-6.  Column 4 lines 18-22.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...  These techniques employ signals embedded in programs.  In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 471 line 35 to page 472 line 1.  Page 13 lines 25-26.  Page 14 lines 6-11.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...  The present invention employs signals embedded in programming.  In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.
		Column 20 lines 16-19.	Suppose a viewer watches a television	Page 470 lines 1-3 and	...transmits the programming transmission of



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

		program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 9-12.  Page 470 lines 19-21.	a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.  The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.

259. The method of claim 257, wherein a switch communicates signals selectively from said receiver and one of a memory and a recorder to said transmitter, said method further		Matrix Switch, 75, in Fig. 3B.  TV receiver, 53, in Fig. 3A.  VTR, 78, in Fig. 3B.  Recorder and Player, 76, in Fig. 3B.  Cable Channel Modulator, 83, in Fig. 3C.	Page 324, line 35.	Matrix Switch, 75, in Fig. 6A.  TV receiver, 53, in Fig. 6A.  78, in Fig. 6A. recorder/players, 76 and 78  Recorder and Player, 76, in Fig. 6A.  Cable Channel Modulator, 83, in Fig. 6B.
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
comprising one from the group consisting of:	detecting a signal which is effective at the one of the broadcast and the cablecast transmitter station to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	instruct communication;	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted	Page 84 lines 26-28.  Page 28 lines 26-27.  Page 49 lines 26-27.  Page 328 lines 14-16.  Page 328 line 31 to page 329 line 1.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...  In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
determining a specific signal source from which to communicate a signal to a transmitter;	Column 11 lines 50-54.	from TV receiver, 53, to the output that leads to modulator, 87.  For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.	
controlling said switch to communicate a signal to said transmitter	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
in response to a signal which is effective at the one of the broadcast and the cablecast transmitter station to instruct communication;	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
				Page 84 lines 26-28.	
				Page 28 lines 26-27.	
				Page 49 lines 26-27.	
				Page 328 lines 14-16.	
controlling said switch to communicate a signal from		Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
a selected signal source; and		Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 4 lines 5-13.</p> <p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored.</p>		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 13 lines 25-32.</p>	<p>information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and <b>embedded in</b> television or radio or other <b>programming transmissions</b> ...</p> <p>... <b>monitor information that identifies what programming is available</b>, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.</p>
<p>260. The method of claim 257, wherein a controller controls a switch to communicate to a plurality of transmitter one of a</p>	<p>Column 11 lines 54-57.</p>	<p>... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 328 line 31 to page 329 line 1.</p>	<p>In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
selected mass medium programming and a control signal, further comprising one from the group consisting of:		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	matrix switch, 75, that outputs to modulator, 87. ... instruction signals embedded in the "Wall Street Week" programming transmission.
	detecting a signal which is effective at the one of the broadcast and the cablecast transmitter station	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
to instruct transmission;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
inputting to said controller a signal which is effective to	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
control said switch;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
controlling said switch to communicate	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that	Page 328 line 22 to page 329 line 1.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
at least one instruct signal according to a transmission schedule;	Column 19 lines 43-44.	leads to modulator, 87.  ... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.  ... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.  Page 84 lines 26-28.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
controlling said switch to communicate a signal from a specific one of	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
a plurality of instruct signal sources; and	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
controlling said switch	Column 11 lines 50-57.	... if controller/computer, 73, determines		Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
				Page 328 line 22 to	For example, computer, 73, receives a given

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
to communicate an instruct signal to a selected one of said plurality of transmitters.			that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	page 329 line 1.	SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
261. The method of claim 257, further comprising one from the group consisting of: transmitting to said receiver station		Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
at least one datum that one of designates		Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
one of a time and a channel of transmission of said instruct signal, and	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205,</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
specify one of the title of and subject matter contained in a mass medium programming associated with said instruct signal; and	Column 19 lines 20-23.	contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.  ...to receive the transmission of cable channel 13;...	Page 439 lines 14-15.  Page 267 lines 20-28 from example #5.  Page 435 lines 16-25.
	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13,...</p>
transmitting to a receiver station	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.		
Reference	Language	Reference	Language	
<p>said control signal to cause said receiver station to</p>	<p>Column 19 lines 17-23.</p> <p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares</p>	



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.		
	Reference	Language	Reference	Language
<p>tune to said one of a</p> <p>broadcast and a cablecast transmission containing a specific</p>	<p>Column 19 lines 23-25.</p>	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 29 lines 11-15.</p>	<p>said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
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instruct signal.			range of broadcast television transmissions available to a local television antenna of conventional design.		television transmissions available to a local television antenna of conventional design.
262. A method of coordinating the processing of data and television programming at a receiver station to present	Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.		Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data</p>
	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Reference
Language	Language	Language	Language
	<p>Column 19 lines 20-23.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Page 267 lines 20-28 from example #5.</p>
<p>a local output, said method comprising the steps of:</p>		<p>Page 435 lines 16-25.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said</p> <p>Page 436 line 9 to page 437 line 3.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 439 lines 14-15.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	
selecting a datum;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that <b>relate</b> to the stocks in its stored portfolio.	Page 449 lines 13-20.	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that</p>



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		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	<p>the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>	<p>Page 250 lines 13-17.</p>	<p>Example #5 begins with the embedding and</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	<p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>	<p>transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via</p>
				Page 251 lines 8-11.	
				Page 263 lines 19-24.	
				Page 37 lines 26-28.	
selecting one of said received plurality of programming units, comprising the steps of:	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	<p>Page 29 lines 4-15.</p>	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via</p>

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				Page 446 lines 17-21.	<p>said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
(a) detecting an identification signal at said receiver station;		Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
(b) identifying one of a channel and a frequency communicating television programming based on said step of detecting;		Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
				Page 435 lines 16-25.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ...</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
				<p>the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
(c) tuning to receive one of said identified channel and said identified frequency;	Column 19 lines 23-25.	... microcomputer, <b>205</b> , may instruct tuner, <b>214</b> , to switch box, <b>201</b> , to channel X ...	Page 437 lines 1-6.	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a</p>

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	Reference	Language	Reference	Language
			<p>predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p>	
(d) selecting said television programming received on said step of tuning;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
outputting said selected television programming on an output device at said receiver station;	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the

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	Reference	Language	Reference	Language
				week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
detecting a signal;	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
generating a local display based on said stored selected datum;	Column 19 line 67 to column 20 line 1.  Column 19 lines 39-41.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  [Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
outputting said local display to said output device to present local output comprising said	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite



Claim Language	Reference	Language	Reference	Language
			Page 451 line 3.	<p>the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>
<p>263. The method of claim 262 further comprises the steps of: scanning a plurality of received one of broadcast and cablecast programming transmissions on a plurality of one of channels and frequencies; and</p>	Column 9 lines 47-57.	<p>The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>Page 248 line 17 to page 249 line 5.</p> <p>Page 257 line 24 to page 258 line 19.</p>	<p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>

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	Reference	Language	Reference	Language
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
			<p>Page 265 line 27 to Page 266 line 21.</p>	<p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>
		<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 250 lines 13-17.</p>	<p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 251 lines 8-11.  Page 263 lines 19-24.  Page 37 lines 26-28.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...  ... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
comparing signals in said plurality of scanned one of channels and frequencies to said identification signal of said television programming unit of interest.	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that

Claim Language	Support to parent application filed November 3, 1981: Reference	Language	Reference	Support to instant specification. Language
			Page 439 lines 14-15.	<p>contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
<p>264. The method of claim 263, wherein said step of identifying one of the channel and the frequency comprises the step of identifying one of the channel and the frequency communicating said television programming unit of interest</p>	Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
based on said step of comparing.	Column 9 lines 47-57.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	<p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p> <p>Page 248 line 17 to page 249 line 5.</p>	<p>programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Language	Reference	Language
	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 257 line 24 to page 258 line 19.</p>	<p>oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,</p>
		<p>Page 265 line 27 to Page 266 line 21.</p>
		<p>Page 250 lines 13-17.</p>
		<p>Page 251 lines 8-11.</p>
		<p>Page 263 lines 19-24.</p>
		<p>Page 37 lines 26-28.</p>

Claim Language	Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language

				and 46.
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265. A method of coordinating the processing of data and television programming at a receiver station to	Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined</p>
	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
present local output, said method comprising the steps of:	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.  ... and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....  And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 8-11.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	
	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the	
storing said selected datum at said receiver station;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
storing information at said receiver station identifying a time and a channel for receiving television programming;	Column 19 lines 5-9.	... microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast. Microcomputer, 205, is preinformed of the time of cablecasting.	Page 428 lines 21-26.	microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 437 lines 1-3.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.  Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Reference	Language
	Reference	Language	Reference	Language
			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13,...</p>
tuning to said identified channel	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	<p>Page 437 lines 1-6.</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>at or before said identified time;</p>	<p>Column 19 lines 45-49.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>





Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
detecting a control signal;	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  This base band signal is then transferred through separate paths to three separate detector devices.
generating a local display based on said stored datum of interest;	Column 6 lines 48-50.  Column 19 line 67 to column 20 line 1.  Column 19 lines 39-41.	This base band signal is then transmitted through separate paths to three separate detector devices.  The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  [Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 26 lines 8-11.  Page 449 lines 13-20.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
outputting said user specific display to said output device to present	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
	Reference	Language	Reference	Language	
a local output comprising said outputted television programming and said outputted local display,		instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
wherein at least one of said steps of generating and outputting is performed in response to said detected control signal.	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3.  Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	And the Fig. 1C combining is displayed.  Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.  And the Fig. 1C combining is displayed.
			Page 451 line 3.

266. A method of coordinating the processing of data and television programming at a receiver station to present	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	<p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a</p>
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Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Language	Reference	Language
<p>Column 19 lines 39-41.</p>	<p>[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.</p>	<p>Page 449 lines 13-20.</p>	<p>plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.</p>
<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p>
<p>Column 19 lines 67 to column 20 line 2.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 446 lines 17-21.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	<p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
<p>a local output, said method comprising the steps of:</p>	<p>[Microcomputer, 205,] records those prices that relate to the stocks in its stored</p>	<p>Page 449 lines 13-20.</p>	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station</p>
<p>selecting a datum;</p>			



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Language	Reference	Language
	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0</p>	<p>frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
		<p>MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>	<p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p> <p>Page 37 lines 26-28.</p> <p>Page 29 lines 4-15.</p>
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>		
	<p>Column 6 lines 23-30.</p> <p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>		



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
selecting one of said plurality of received television programming units;	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	...and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
outputting said selected television programming unit on an output device at said receiver station;	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.  Page 446 lines 17-21.	
detecting a first control signal;	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...		Page 451 lines 6-7.  Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...  ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...  This base band signal is then transferred through separate paths to three separate detector devices.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		Page 24 lines 5-6.  Page 451 lines 7-9.  Page 34 line 35 to page 35 line 1.	
generating locally pertinent information based on stored data of interest in accordance with said first control signal;	Column 19 line 67 to column 20 line 1.  Column 19 lines 48-53.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...  These signals instruct microcomputer, 205, to		Page 26 lines 8-11.  Page 23 line 35 to page 24 line 16.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...  Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...		Page 451 lines 7-11.	... the program instruction set in the first

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		and to transmit these overlays to TV set, 202,  upon command.	Page 26 lines 4-8.  Page 44 lines 14-17.  Page 26 lines 20-28.	<p>message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
detecting a second control signal;	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	<p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
outputting locally pertinent information display to said output device in response to said second control signal, to present					retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal instructs microcomputer, 205, ...
	outputting locally pertinent information display to said output device in response to said second control signal, to present	Column 19 line 64 to column 20 line 1.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 line 4.  Page 26 lines 1-2.  Page 37 lines 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a local output comprising a portion of said outputted television programming unit and said outputted locally pertinent information.		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 451 line 3. Page 26 lines 8-11.	transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance  And the Fig. 1C combining is displayed.  And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
267. A method of providing data of interest to a receiver station from a remote data source,		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said data of interest for use at said receiver station in one of generating and outputting a receiver specific datum, said method comprising the steps of:	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
storing data at said remote data source;	Column 19 lines 37-39.	[Microcomputer, 205,] may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
receiving at said remote data source a query from said receiver station;	Column 19 lines 37-39.	[Microcomputer, 205,] may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing at least a portion of said transmitted data;		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing at least a portion of said transmitted data;		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
transmitting from a		Column 15 lines 20-22.	In any of the cases illustrated in FIGs 4A	Page 311 lines 26-28.	And for example, the transmitted

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
second remote source to said receiver station a signal which controls said receiver station to		through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion ...	<p>Page 311 line 33 to page 312 line 2.</p> <p>Page 293 lines 32-35.</p> <p>Page 301 lines 6-9.</p> <p>Page 308 line 35 to page 309 line 3.</p> <p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>programming may be processed through fewer than three steps of decryption or more than three...</p> <p>And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating ...</p> <p>At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion ...</p> <p>... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...</p> <p>At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in</p>
select and process an instruct signal	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...		



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
which is effective at said receiver station to coordinate a presentation to a user of output materials					retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 line 4.  Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	Said signal instructs microcomputer, 205, ...  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
					Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the
				Page 26 lines 4-11.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
communicated at least one of from different sources and	<u>First:</u> Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 451 line 3.	received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 25 lines 26-33.	And the Fig. 1C combining is displayed.
			Page 59 lines 29-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
			Page 25 line 34 to page 26 line 1.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 90 lines 4-7.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.		
	Reference	Language	Reference	Language
<p>at different times,</p>	<p><u>Second:</u> Column 19 lines 35-41.</p>	<p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p>	<p>6, and page 90 lines 4-11.</p> <p>Page 449 lines 13-35.</p>	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>
	<p><u>First</u> Column 19 lines 45-46.</p> <p><u>Second</u></p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>	<p>Page 451 lines 6-7.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said presentation including said receiver specific datum.		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
268. A method of communicating subscriber station information from a subscriber station to at least one remote data collection station, said method comprising the steps of:		Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
				Page 273 lines 4-6.	The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
				Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
inputting a subscriber reaction at said subscriber station;		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	information to said first computer.  Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
receiving at said subscriber station information that designates at least one of an instruct signal to process and an output to deliver in consequence of subscriber input;		Column 20 lines 27-37.	Five minutes later,  a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.  This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,  instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form	Page 471 line 26 to page 472 line 17.  Page 476 line 34 to Page 477 line 8.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...  (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 477 lines 8-17.	second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.  In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....  ... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 16-17.  Page 472 lines 27-32.	controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...  (At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145 and 203, ...
processing said instruct signal		Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
<p>to coordinate a</p>	<p>Column 20 lines 37-42.</p>	<p>instructs buffer/comparator, 8, that, if 567 ...</p> <p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200,</p> <p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p>	<p>and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
presentation of output materials communicated at least one of from different sources and					<p>example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
			to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		Page 470 lines 1-3 and Page 470 lines 9-12.	<p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...</p>
	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.		Page 470 lines 19-21. Page 473 lines 3-13.	<p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-...</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at different times at said subscriber station				Page 477 lines 12-17.	instructions ... ... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
				Page 477 lines 23-29.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
				Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
	Column 20 line 27.	Five minutes later, ...		Page 471 lines 26-28.	Five minutes later, said program originating studio embeds in the transmission of the

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in consequence of said step of determining; and	Column 20 lines 46-47.	When the transmission of the recipe ...	Page 473 lines 3-13.	"Exotic Meals of India" programming and transmits a particular first SPAM message ...	
	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... <b>generate-recipe</b> ... instructions ...	
	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
transferring from said subscriber station to said at least one remote data collection station at least one datum at least one of confirming delivery of said instruct signal from said step of processing and confirming delivery of said coordinated presentation from said step of processing.		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
			Page 471 lines 26-31.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	
				Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 473 lines 3-8.	consists of ... meter-monitor information, ....  One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...  Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
	first, ordered			Page 472 lines 23-27 with	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
	and, second, delivered.			Page 471 lines 14-16.  Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
269. The method of claim 268, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...		Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
storing a subscriber instruction to		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
		Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
		Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
				Page 95 lines 18-24.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ... So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
receive at least one of mass medium programs, data,		Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
news items, and	Column 18 lines 52-55.	<p>The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular AT&amp;T news item in a particular Transmit-AT&amp;T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said AT&amp;T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&amp;T news item, and an end of file signal.</p>	<p>fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p> <p>Page 420 line 32 to page 421 line 17.</p>
computer control instructions; and	Column 19 lines 45-49.	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
				Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
receiving said at least one of specific mass medium programs, data, news items, and computer control instructions	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
in accordance with said subscriber instruction.	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.		Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language

					Week" program when said program is transmitted.
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270. The method of claim 268, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
a subscriber instruction to	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
one of process and present at least one of mass medium programs, data, news items, and	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
computer control instructions in a specific fashion; and	Column 20 lines 31-37.	Page 471 line 26 to page 472 line 17.	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix</p>
		476 line 34 to page 477 line 8.	
		Page 477 lines 8-17.	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
one of processing and	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 474 lines 3-7.	switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ... ... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
			Page 28 lines 25-35.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
Language		Language		Language	
presenting said at least one of specific mass medium programs, data, news items, and computer control instructions in accordance with said subscriber instruction.				Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
		first, ordered		Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
		and, second, delivered.		Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
				Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 46-49.		When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...
				Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 477 lines 23-29.	said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message.
				Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
				Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
271. The method of claim 268, wherein one of said information that designates at least one of an instruct signal to process and an output to deliver in consequence of subscriber input and said instruct signal is detected in an information transmission from one of a data source and a programming source, said method further comprising the steps of:	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...	
programming a processor to respond to	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
information communicated in said information transmission from said one of a data source and a programming source;			programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.		controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
receiving an information transmission from said one of a data source and a programming source;	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	<p>Figs. 2A-2C. Page 35 lines 1-6.</p> <p>Page 35 lines 16-18.</p> <p>Page 35 lines 27-30.</p> <p>Page 36 lines 1-3.</p> <p>Page 36 lines 18-20.</p> <p>Page 37 lines 26-28.</p>	<p><i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.</p> <p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and  Page 470 lines 9-12.  Page 470 lines 19-21.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
inputting at least a portion of said information transmission to a control signal detector;		Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and  Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."  At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...  ... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
		Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
detecting one of data and said instruct signal in said at least a portion of said information transmission; and		Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>passing one of said detected data and said detected instruct signal to said processor.</p>		Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 472 lines 4-12.  Page 37 line 26 to page 38 line 8.	<p>... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
<p>272. A method of controlling a remote intermediate television transmitter station to communicate television program material to</p>		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
		Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 324 lines 18-21.</p>	Fig. 6 illustrates Signal Processing Apparatus

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference		Reference	
		Language		Language	
at least one receiver station,	Column 17 lines 47-53.	instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
said remote intermediate television transmitter station including one of a broadcast and a cablecast	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.	Page 396 lines 8-10.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
transmitter for transmitting television programming,	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 324 lines 8-17.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
a plurality of selective transfer devices each operatively connected to		Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.	... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,
said one of a broadcast and a cablecast transmitter for communicating said television programming,		Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
a television receiver for receiving said television programming from		Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
at least one origination transmitter station,		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.



Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
a control signal detector,	Column 11 lines 3-5.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....	Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 325 line 34 to page 326 line 7.
and one of a controller and a computer capable of controlling	Column 11 lines 15-17.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  Cable program controller and computer, 73, is the central automatic control unit for the transmission station.	Page 59 lines 29-33  Page 326 lines 19-20.
at least one of said plurality of said	Column 11 lines 44-46.	Computer, 73, has means for communicating control information with	Page 328 lines 14-16.

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
selective transfer devices, said remote intermediate television transmitter station adapted  (i) to detect the presence of at least one control signal,			matrix switch, 75, and video recorder/players, 76 and 78.		matrix switch, 75, and video recorders, 76 and 78, ....
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...		Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
				Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
(ii) to control the communication of said television programming	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed		Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
<p>in response to said at least one control signal, and</p>	<p>transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...</p> <p>Column 11 lines 38-46.</p>	<p>the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
(iii) to deliver at said one of a broadcast and a cablecast transmitter said television programming, said method comprising the steps of:	Column 11 lines 30-31.  Column 10 lines 49-52.	... transmit each program unit to cable field distribution system, 93.  When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations or embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
			Page 326 line 35 to page 327 line 2.  Page 328 line 13.	... each program unit, ... the station should transmit the unit, ...  ... transmit the programming of each received program unit.
receiving said television programming at said at least one origination transmitter station and	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 lines 34-35.  Page 90 lines 4-7.	At this point, an instruction signal is generated at said program originating studio, ...  The second message is of the information

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
delivering said television programming to at least one origination transmitter, said television programming having an instruct signal		Column 19 lines 62-63	... and [the instruction signal] is transmitted in the programming transmission.	Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
		Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 25 line 34 to page 26 line 1.  Page 59 lines 29-33.	... an instruction signal is ... embedded in the programming transmission, and transmitted.  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
which is effective at said at least one receiver station to coordinate a presentation of output materials		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs	Page 25 lines 34-35.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	At this point, an instruction signal is generated at said program originating studio, ...  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
				Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Reference	Language
communicated at least one of from different sources	<p>microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p> <p><i>First</i> Column 19 line 53-56.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p> <p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p><i>First</i> Page 25 lines 26-33.</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
	<p>Column 19 lines 60-63.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p> <p><u>Second</u> Column 19 lines 35-41.</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p>		<p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p><u>Second</u> Page 449 lines 13-35.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
and at different times;	<p><u>First</u> Column 19 lines 45-46.</p> <p><u>Second</u> Column 19 lines 35-37.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.</p>	<p><u>First</u> Page 451 lines 6-7.</p> <p><u>Second</u> Page 449 lines 13-26.</p>	<p>fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>
receiving said at least one control signal	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the	Page 325 line 34 to page 326 line 11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	
Reference	Language	Reference	Language
<p>which</p> <p>at said remote intermediate television transmitter station operates to control the communication of said television programming; and</p>	<p>instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ...</p> <p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p> <p>Column 11 lines 38-46.</p>	<p>Page 326 lines 16-18.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
transmitting said at least one control signal from said at least one origination transmitter	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
By comparing identification signals on the incoming programming ...	Column 11 lines 38-39.		Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command." Said second command has a "00" header, an execution segment, and a meter-monitor ...
			Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

before a specific time.	Column 11 lines 28-31.			<p>71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and <b>embedded in</b> television or radio or other <b>programming transmissions</b> ...</p> <p>... <b>monitor information that identifies what programming</b> is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Such input information can indicate <b>when</b> and how the station should expect to receive each program unit, <b>when</b> and on which channel or channels and how the station should transmit the unit, ...</p>
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
		Such input information might also indicate <b>when</b> and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	

273. The method of claim 272, wherein said at least one control signal comprises one of a code and	Column 2 lines 63-66.	(The term "signal unit" hereinafter means <b>one complete signal instruction</b> or <b>information message unit</b> . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means <b>one complete signal instruction</b> or <b>information message unit</b> . Examples of signal units are a unique code identifying a programming unit, or a ...
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Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>a datum which</p> <p>operates at said remote intermediate television transmitter station to identify said television programming, said method further comprising the step of</p> <p>transmitting a schedule which</p> <p>operates at said remote intermediate television transmitter station</p>	Column 3 lines 6-8.	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...</p>	<p>Page 14 line 35 to page 15 line 2.</p> <p>Page 30 lines 7-9.</p> <p>Page 36 line 32 to page 37 line 3.</p>	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ....</p> <p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p>	
	Column 11 lines 39-41.	<p>... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...</p>	Page 328 lines 9-10.		
	Column 11 lines 38-43.	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	Page 327 line 35 to page 328 line 13.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6</p>	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>to communicate said television programming to said at least one origination transmitter at said specific time.</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>274. The method of claim 272, further comprising the step of</p>	<p>Column 19 lines 43-44.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>Page 21 lines 23-24.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>

Claim Language		Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
embedding said at least one control signal in said television programming before transmitting said television programming to said remote intermediate television transmitter station.	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	Meter-monitor segments contain meter information and/or monitor information.
275. The method of claim 275, wherein one of (a) said specific time is a scheduled time of transmitting said television programming	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>at said remote intermediate television transmitter station and</p> <p>(b) said at least one control signal is effective at said remote intermediate television transmitter station to control</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
	<p>Column 10 lines 61-63.</p>	<p>Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62.</p>	<p>Page 84 lines 26-28.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6, ...
276. A method of controlling a remote intermediate transmitter station to communicate at least one instruct signal to at least one receiver station, said remote intermediate transmitter station including	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.  Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 324 lines 18-21.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p>



Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
one of a broadcast and a cablecast transmitter,		Column 10 lines 15-20.	television programming.  The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
a plurality of selective transfer devices each operatively connected to said one of a broadcast and a cablecast transmitter,		Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.	... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,
a data receiver for receiving said at least one instruct signal from at least one origination transmitter station,		Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
		Column 4 lines 26-28.	Signals may also be transmitted on frequencies outside the ranges of television and radio.	Page 14 lines 15-17.	In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
			Page 463 lines 10-29.	<p>(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS</p>
a control signal detector, and	<p>Column 19 lines 43-44.</p> <p>Column 11 lines 3-5.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...</p>	<p>Page 21 lines 23-24.</p> <p>Page 325 line 34 to page 326 line 7.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
one of a controller and a computer capable of controlling	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 59 lines 29-33	apparatus of said intermediate transmission station; ... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
at least one of said plurality of selective transfer devices, said remote intermediate transmitter station adapted to	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 326 lines 19-20.  Page 328 lines 14-16.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ....
detect the presence of at least one control signal,	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; ...
			Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
to control the communication of said at least one instruct signal		Column 6 lines 50-53.	These separate detectors are designed to act on the particular frequency ranges in which the encoded information may be found.	Page 35 lines 1-4.	The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found.
		Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
		Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
in response to said at least one control signal, and		Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Reference	Reference	Language
<p>to deliver at said one of a broadcast and a cablecast transmitter said at least one instruct signal, said method comprising the steps of:</p>	<p>Column 11 lines 50-57.</p>	<p>programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion,</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
receiving said at least one instruct signal at said at least one origination transmitter station and	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
delivering said at least one instruct signal to at least one origination transmitter, said at least one instruct signal	Column 19 lines 62-63	... and [the instruction signal] is transmitted in the programming transmission.	Page 25 lines 34-35.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	At this point, an instruction signal is generated at said program originating studio, ...  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
(i) being effective at said at least one receiver station to generate output information content to be included in a coordinated	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs	Page 25 line 34 to page 26 line 1.  Page 25 line 34 to page 26 line 2.	... an instruction signal is ... embedded in the programming transmission, and transmitted.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Language	Reference
Language	Language	Language
<p>presentation</p>	<p>microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p>
<p>of output materials communicated at least one of from different sources</p>	<p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
		<p>Page 37 line 26 to page 38 line 8.</p>
		<p>Page 26 lines 4-11.</p>
		<p>Page 451 line 3.</p>
		<p><i>First</i> Page 25 lines 26-33.</p>
		<p>And the Fig. 1C combining is displayed.</p>
		<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor. 202M.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	<u>Second</u> Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  <u>Second</u> Page 449 lines 13-35.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and at different times		<u>First</u> Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	<u>First</u> Page 451 lines 6-7.	fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
		<u>Second</u> Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	<u>Second</u> Page 449 lines 13-26.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
and (ii) having an associated one of a code		<u>In General</u> Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or	<u>In General</u> Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and a datum designating one of signal content and output information content to be generated;			information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...		message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>	Page 14 line 32 to page 15 line 2.	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
	<p><i>Specifically</i> Column 19 lines 64-66.</p> <p><i>With respect to</i> Column 19 lines 48-53.</p>	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...</p> <p>These signals instruct microcomputer, 205, to</p>	<p><i>Specifically</i> Page 26 lines 1-8.</p> <p><i>With respect to</i> Page 23 line 35 to page 24 line 16.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language
	<p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>
<p>receiving said at least one control signal that at said remote intermediate data transmitter station operates to control the communication of said at least one instruct signal; and</p>	<p>Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule ...</p>
		<p>instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
		<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			<p>channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	
transferring said at least one control signal from said at least one origination transmitter before a specific time, said transmitter	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 59 lines 29-33.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed</p>
transmitting said at least one instruct signal, said associated one of a	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
code and a datum, and said at least one control signal.			transmitted in the programing transmission.		apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 38-39.		By comparing identification signals on the incoming programming ...	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				transmission stations and embedded in television or radio or other programming transmissions ... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.
277. The method of claim 276, wherein said at least one control signal comprises one of said code and said datum,  said method further comprising the step of	Column 2 lines 63-66.  Column 3 lines 6-8.  Column 7 lines 36-37.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 14 lines 27-29.  Page 14 line 35 to page 15 line 2.  Page 30 lines 7-9.  Page 36 line 32 to page 37 line 3.  Page 13 lines 25-26.  Page 327 line 35 to page 328 line 13.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.  Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ....  The present invention employs signals embedded in programming.  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,
embedding one of  said code and said datum	Column 4 lines 5-6.  Column 11 lines 38-39.	These techniques employ signals embedded in programs.  By comparing identification signals on the incoming programming ...		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
in an information transmission containing said instruct signal.					received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and <b>embedded in</b> television or radio or other <b>programming transmissions</b> ...
				Page 28 lines 26-27.	... <b>monitor information that identifies what programming is available</b> , ...
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
278. The method of claim 276, wherein said specific time is a	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.		Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
scheduled time of transmitting one of	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...		Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6, ...

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
(i) said at least one instruct signal and  (ii) a program associated with said at least one instruct signal from said remote intermediate transmitter station,	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...	
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...	
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	
	Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-23.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the	



Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.		
Reference	Language	Reference	Language	Language
<p>and said at least one control signal is effective at said remote intermediate transmitter station to control at least one of said plurality of selective transfer devices at different times.</p>	<p>Column 11 lines 57-65.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Page 329 line 2-22.</p>	<p>fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>	
<p>279. The method of claim 276, further comprising the step of embedding said at least one control</p>	<p>Column 4 lines 5-6.</p> <p>Column 11 lines 38-39.</p>	<p>Page 13 lines 25-26.</p> <p>Page 327 line 35 to</p>	<p>The present invention employs signals embedded in programming.</p> <p>Computer, 73, monitors incoming</p>	<p><i>I2CR 357, Appendix A, Page 1196 of 1288</i></p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference		Reference	
		Language		Language	
signal			the incoming programming ...	page 328 line 13.	programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
in an information transmission containing said instruct signal	Column 19 lines 43-44.				
before	Column 11 lines 38-43.		By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
transmitting said instruct signal to said remote intermediate transmitter station.	Column 19 line 60 to column 20 line 1.	<p>programming.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well</p>

Claim Language	Support to parent application filed November 3, 1981.	Language	Reference
			Language
			Reference
			known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.  The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-11.	
280. The method of claim 276, wherein said at least one control signal comprises a second one of a code and  a datum which  operates at said remote intermediate transmitter station to	Column 2 lines 63-66.  Column 3 lines 6-8.  Column 7 lines 36-37.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...  Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.  Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 14 lines 27-29.  Page 14 line 35 to page 15 line 2.  Page 30 lines 7-9.  Page 36 line 32 to page 39,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
select one of said at least one instruct signal and program content associated with	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	37 line 3.	44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ....  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,
said at least one instruct signal, said method further comprising the step of				

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Such input information can include the complete programming schedule of the station of Fig. 6, ...  ... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...  ... with information of the programming
				Page 84 lines 26-28.	
				Page 28 lines 26-27.	
				Page 49 lines 26-27.	
				Page 326 lines 30-31.	
transmitting a second		Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...	Page 339 lines 11-23.	
		Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...		
		Column 11 lines 39-41.	... the programming schedule received	Page 328 lines 9-10.	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
instruct signal which			earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 326 lines 28-30.	schedule, received earlier from input, 74, and/or network, 98, ...
operates at said remote intermediate transmitter station at said specific time to	Column 11 lines 38-43.		By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.  Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
communicate said second instruct signal to said at least one	Column 11 lines 50-57.		... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
origination transmitter.		field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.			added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
281. The method of claim 276, further comprising the step of generating and adding a signal, at said remote intermediate transmitter station, to an information transmission containing said at least one instruct signal,	Column 12 lines 38-41.	... signal generators, 82, 86, and 90, also well known in the art, that controller/computer, 73, can instruct to add signals to programming as required.	Page 354 lines 21-24.		... and signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM information as required.
said information transmission to be transmitted to said at least one receiver station.	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 337 lines 3-10.		In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.		... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.		Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of



Claim Language	Support to parent application filed November 3, 1981	Support to instant specification	Language
Reference	Reference	Reference	Language
			<p>Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p>
<p>282. A method of controlling a receiver station including the steps of:</p>	<p>Column 9 lines 53-57.</p>	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. Automatically oscillator, 6, causes switch, 1, to shift its contact lever from the first alternate contact to the second alternate contact to which wireless transmissions are inputted and causes mixer, 3, to select the frequency of channel 5 and input said frequency of interest, at a fixed frequency, to decoder, 30.</p> <p>Controller, 20, has capacity for keeping in track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information,</p>
		<p>Page 253 lines 19-28.</p>	<p>Page 258 lines 10-19.</p>
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 250 lines 13-17.</p>	
		<p>Page 251 lines 8-11.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 259 lines 23-29.	to be detected at detector, 34; ...  Subsequently, said remote wireless station transmits the second combining synch command of the "Wall Street Week" program. ... Receiving the binary information of said command causes control processor, 39J, to record said binary information ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
detecting one of the presence and		Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
absence of		Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
		Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform ... when signals that they ... look for in predetermined fashions, ... fail to appear.	Page 258 lines 10-19.	Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
one of a broadcast and a cablecast		Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
control signal;	Column 8 lines 58-60.	input is shown in Figure 1.  Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 250 lines 22-26.  Page 251 lines 3-8.  Page 59 lines 29-31.	programming and a broadcast television input.  Said cable transmission is inputted via said first alternate contact of switch, 1, and said contact lever to mixer, 3. Mixer, 3, selects the frequency of channel 13 and inputs said frequency of interest, at a fixed frequency, to TV signal decoder, 30. Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.  A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
inputting an instruct signal to a processor	Column 8 lines 27-29.  Column 6 lines 23-26.	The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.  A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 248 line 35 to page 249 line 5.  Page 29 lines 4-7.	... controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.  Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
based on said step of detecting;	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 251 lines 3-8.  Page 253 lines 10-11.	Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.  Finally, controller, 39J, transmits particular detection-complete information to controller, 20; ...

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
		Reference	Language
	Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, ... fail to appear.	<p>Page 253 lines 19-22.</p> <p>Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
	controlling said processor to output specific information in response to said step of inputting said signal; and	Column 9 lines 53-57.	<p>Page 258 lines 10-19.</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
			<p>Page 253 lines 19-28.</p> <p>Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5. Automatically oscillator, 6, causes switch, 1, to shift its contact lever from the first alternate contact to the second alternate contact to which wireless transmissions are inputted and causes mixer, 3, to select the frequency of channel 5 and input said frequency of interest, at a fixed frequency, to decoder, 30.</p>
			<p>Page 258 lines 10-19.</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
Reference	Language	Reference	Language
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p> <p>Column 19 lines 18-20.</p>	<p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 259 lines 23-29.</p> <p>Page 37 lines 26-28.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>Subsequently, said remote wireless station transmits the second combining synchronizing command of the "Wall Street Week" program. ...</p> <p>Receiving the binary information of said command causes control processor, 39J, to record said binary information ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 268 line 28 to page 269 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
coordinating a presentation of output materials	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or

Claim Language	Support to parent application filed November 3, 1981	Language	Reference	Support to instant specification	Language
<p><u>ONE OF:</u></p> <p>communicated at least one of from different sources</p>			<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p>	<p>fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>	
	<p>Column 19 line 53-56.</p> <p>Column 19 lines 60-63.</p>	<p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 25 lines 26-33.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p>	<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and at different times on the basis of information received from said processor based on said step of controlling said processor.		Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 451 lines 6-7.	transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...  When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
	<u>OR:</u>  communicated at least one of from different sources	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and at different times on the basis of information received from said processor based on said step of controlling said processor.		Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.  Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
283. The method of claim 282, wherein a buffer is operatively connected to said processor for buffering input, said method further comprising the step of:		Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
				Language	
inputting said instruct-to-react signal directly to said processor.	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.		Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
				Page 156 line 33 to page 157 line 10.	Fig. 3A shows one such preferred controller, 39.  One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series. Buffer, 39A, and processor, 39B, are the first buffer and processor of the series and perform the forward error correcting functions of controller, 39. Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions. Buffer, 39E, and control processor, 39J, are the third buffer and processor. All controlled functions invoked at controller, 39, by received SPAM signals are invoked at control processor, 39J.
				Page 157 line 34 to page 158 line 1.	As Fig. 3A shows, each processor, 39B, 39D, and 39J, has associated RAM and ROM and, hence, constitutes a programmable controller in its own right.
	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.		Page 251 lines 3-8.  Page 253 lines 10-11.	Thereafter, the embedded information ... is caused to be recorded ... in the same fashion that the embedded information of said message is detected and recorded at decoder, 203, in example #3.  Finally, controller, 39J, transmits particular detection-complete information to controller,

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Reference	Language
	<p>Column 8 line 68 to column 9 line 4.</p>	<p>Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they ... look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.</p>	<p>Page 253 lines 19-22.</p> <p>Page 258 lines 10-19.</p> <p>Page 254 line 23 to page 255 line 3.</p>	<p>20; ...</p> <p>Receiving said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 5.</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, automatically causes control processor, 39J, to cause all apparatus of decoder, 30, cease receiving SPAM message information and delete all information received on said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>... information and transmit it to digital detector, 34; causing digital detector, 34, to detect the binary information of said signal information and transfer said binary information to controller, 39. Receiving said binary information at controller, 39, causes the binary SPAM information of the wireless channel 5 transmission to be checked and corrected, as necessary, at processor, 39B; converted into locally usable binary information at processor, 39D; and checked for end of file signal information at EOFs valve, 39F, and transmitted to the null output of matrix switch, 39I, until EOFs valve, 39F, detects an end of file signal. In due course, said EOFs valve, 39F, receives the aforementioned end of file signal causing said valve, 39F, to detect said signal and transmit the aforementioned interrupt signal of EOFs-signal-detected information to said control</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				Page 259 lines 3-29.	<p>processor, 39J. Receiving said EOFs-signal-detected ...</p> <p>In due course said remote wireless station transmits the end of file signal that terminates said information segment, and the EOFs valve, 39F, of decoder, 30, receives and detects said signal, in its end of file detecting fashion, causing said valve, 39F, to transmit the aforementioned EOFs-signal-detected information to said control processor, 39J. Just as applied in the case of the 2nd command (#5), receiving said EOFs-signal-detected information causes control processor, 39J, to cause EOFs valve, 39F, to discard all information of said end of file signal; to cause said matrix switch, 39I, to cease transferring SPAM message information from said EOFs valve, 39F, to its null output information and commence transferring SPAM message information from said valve, 39F, to said control processor, 39J; then to cause EOFs valve, 39F, to recommence processing inputted signal words in its preprogrammed fashion and transferring said words to matrix switch, 39I; and to commence waiting to receive from said switch, 39I, the binary information of a subsequent SPAM header.</p> <p>Subsequently, said remote wireless station transmits the second combining synch command of the "Wall Street Week" program. (Hereinafter, said command may be called the "3<sup>rd</sup> command (#5).")</p>
284. The method of claim 282, wherein said processor processes a datum designating one of a television channel and a television	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer,	Page 435 lines 16-18.	Page 267 lines 20-28 from example #5.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5)</p>

Claim Language	Support to parent application filed November 3, 1981	Support to instant specification
Reference	Reference	Reference
Language	Language	Language
<p>program, said method further comprising the step of</p>	<p>205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference		Reference	
		Language		Language	
controlling a tuner to tune one of a receiver and a converter to receive said one of a television channel and a television program designated by said processed datum.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...		Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
				Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
				Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 439 lines 9-15.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

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285. The method of claim 282, wherein said processor processes a datum designating at least one channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
			Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>multichannel cablecast and a multichannel broadcast signal, said method further comprising the step of</p> <p>controlling a tuner to tune a converter to receive said at least one channel designated by said processed datum.</p>	<p>Column 6 lines 23-26.</p> <p>Column 19 lines 27-29.</p> <p>Column 19 lines 23-25.</p>	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p> <p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 439 lines 14-15.</p> <p>Page 29 lines 4-7.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 437 lines 1-6.</p>	<p>instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a</p>



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
			<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	
286. The method of claim 282, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
controlling a selective transfer device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...
			Page 439 lines 14-15.	Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.
			Page 445 line 24 to page 446 line 1.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.  ... to receive the transmission of cable channel 13; ...  ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Reference	Language
<p>a control signal detector at least a portion of said one of a television channel and a television program designated by said processed datum.</p>	Column 19 lines 45-49.	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...</p>	<p>with said audio ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
		Page 451 lines 6-7.	
		Page 23 line 35 to page 24 line 4.	
		Page 37 line 26 to page 38 line 8.	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
		Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
		Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
	Column 6 lines 48-50.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
287. The method of claim 282, wherein said processor processes a datum designating one of a television channel	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands.</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Language
and a television program, said method further comprising the step of	Reference	Reference	Language
		<p>predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
		<p>from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes ... microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
		<p>Page 439 lines 14-15.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a control signal detector to search for said one of a broadcast and a cablecast control signal in said one of a television channel and a television program designated by said processed datum.	Column 17 lines 28-33.	... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)		Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
288. The method of claim 282, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				<p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions</p>
controlling a selective transfer device to input to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 439 lines 14-15.  Page 445 line 24 to page 446 line 1.          Page 446 lines 17-21.   Page 451 lines 6-7.  Page 23 line 35 to	
a computer said one of a broadcast and a cablecast control signal detected in said one of a	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to		

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
television channel and a television program designated by said processed datum.		microcomputer, 205. These signals instruct microcomputer, 205 ...	page 24 line 4.	is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
			Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
289. The method of claim 282, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of		... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
	Column 19 lines 17-23.		Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
controlling a computer to respond to said one of a broadcast and a cablecast control signal detected in said one of a	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	<p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p> <p>Page 21 lines 20-24.</p>	<p>receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p>



Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
television channel and a television program designated by said processed datum.	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p>
		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks'</p>		

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

		performance ...		overlaid on the studio generated graphic. And microcomputer, 205; commences ...
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290. The method of claim 282, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the step of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and</p>
			Page 436 line 9 to page 437 line 3.	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Reference	Language
controlling a television monitor to display one of video and audio contained in said one of a television channel and a television program designated by said processed datum.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 439 lines 14-15.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>
291. The method of claim 282, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205.</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	
Reference	Language	Reference	Language
<p>step of</p>		<p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>	<p>controlling a storage device to process one of</p>
	<p>Page 436 line 9 to page 437 line 3.</p>	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p>	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and</p>
<p>controlling a storage device to process one of</p>	<p>Column 19 lines 23-27.</p>		<p>Determining a match causes microcomputer, 205, automatically to input said</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
video and audio contained in said one of a television channel and a television program designated by said processed datum.			may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...		please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... ... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....
				Page 295 lines 6-8.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
				Page 439 lines 9-15.	
				Page 445 lines 24-27.	
				Page 446 lines 18-23.	
292. The method of claim 282, wherein said processor processes a datum designating one of a television channel and a television program, said method further comprising the	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205.

Claim Language	Reference	Language	Reference	Language
<p>step of</p>			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
<p>controlling a selective transfer device to</p>	<p>Column 19 lines 23-29.</p>	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and</p>	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p>	<p>Determining a match causes microcomputer, 205, automatically to input said</p>

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Claim Language	Reference	Reference
Claim Language	Language	Language
communicate to one of a storage device and a television monitor said one of a television channel and a television program designated by said processed datum.	may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and</p>
		<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>



Claim Language	Support to parent application filed November 3, 1981	Support to instant specification	
Reference	Language	Reference	Language
			audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
293. The method of claim 282, wherein said processor processes a datum designating at least one channel of one of a	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>multichannel cablecast and a multichannel broadcast signal, said method further comprising the step of</p> <p>controlling a selective transfer device to input to</p>	Column 6 lines 23-26.	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p> <p>... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>	Page 439 lines 14-15.	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p>
	Column 19 lines 27-29.			Page 445 line 24 to page 446 line 1.	
<p>a control signal detector at least a portion of said one of a television channel and a television program designated by</p>	Column 19 lines 45-49.	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct</p>	<p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program</p>	Page 446 lines 17-21.	
				Page 451 lines 6-7.	
				Page 23 line 35 to page 24 line 4.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said processed datum.		microcomputer, 205 ...	<p>originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>	
	Column 6 lines 48-50.		<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 34 line 35 to page 35 line 1.</p>	
		This base band signal is then transmitted through separate paths to three separate detector devices.		
294. The method of claim 282, wherein said datum processes a datum designating at least one channel of one of a	Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>multichannel cablecast and a multichannel broadcast signal, said method further comprising the step of</p>	<p>Column 6 lines 23-26.</p>	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p>	<p>Page 436 line 9 to page 437 line 3.</p>	<p>described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a control signal detector to search for said one of a broadcast and a cablecast control signal in said at least one channel designated by said processed datum.		Column 17 lines 28-33.	... control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)	Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
295. The method of claim 282, wherein said processor processes a datum designating at least one channel of one of a		Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<p>multichannel cablecast and a multichannel broadcast signal, said method further comprising the step of controlling a selective transfer device to</p> <p>input to a computer at</p>	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 439 lines 14-15.	<p><i>the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
			Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
	Column 19 lines 43-49.	... instruction signals embedded in the	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Page 21 lines 23-24.	... instruction signals embedded in the

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
least one of said one of a broadcast and a cablecast control signal detected in said at least one channel designated by said processed datum.			<p>"Wall Street Week" programing transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 451 lines 6-7.</p>	<p>"Wall Street Week" programming transmission.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p>
				<p>Page 23 line 35 to page 24 line 4.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>
			<p>These signals instruct microcomputer, 205, ...</p>	<p>Page 37 line 26 to page 38 line 8.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
				<p>Page 24 lines 5-6.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p>
296. The method of claim 282, wherein said processor processes a datum designating at least one channel of one of a multichannel cablecast and a		Column 19 lines 17-23.	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 435 lines 16-18.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p>
				<p>Page 267 lines 20-28 from example #5.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>multichannel broadcast signal, said method further comprising the step of</p>	<p>Column 6 lines 23-26.</p>	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p>	<p>Page 436 line 9 to page 437 line 3.</p>	<p>described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlling a computer to respond to said one of a broadcast and a cablecast control signal detected in said at least one channel designated by said processed datum.	Column 19 lines 42-44.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.	Microcomputer, 205, is preprogramed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")	Page 23 line 35 to page 24 line 16.	
			A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a	Page 44 lines 14-17.	
			(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a	Page 26 lines 20-28.	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 19 line 60 to column 20 line 1.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 lines 4-11.</p>	<p>combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV</p>

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
			The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
297. The method of claim 282, wherein said processor processes a datum designating at least one channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		Page 435 lines 16-18.  Page 267 lines 20-28 from example #5.  Page 436 line 9 to page 437 line 3.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...  All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)  Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...  Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week"

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<p>multichannel cablecast and a multichannel broadcast signal, said method further comprising the step of</p> <p>controlling a television monitor to display one of video and audio contained in at least one channel designated by said processed datum.</p>	Column 6 lines 23-26.	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p>	<p>Page 439 lines 14-15.</p> <p>Page 29 lines 4-7.</p>	<p><i>program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ...</p>
	Column 19 lines 27-29.	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
claim 282, wherein said processor processes a datum designating at least one channel of one of a		in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 267 lines 20-28 from example #5.</p>	<p>all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to</p>	<p>Page 436 line 9 to page 437 line 3.</p>	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification.	
		Reference	Language	Reference	Language
multichannel cablecast and a multichannel broadcast signal, said method further comprising the step of controlling a storage device to process one of video and audio contained in said at least one channel designated by said processed datum.	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.  ... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 439 lines 14-15.	the controller, 20.	
	Column 19 lines 23-27.		Page 29 lines 4-7.	... to receive the transmission of cable channel 13; ...	
			Page 437 lines 1-6.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.	
				Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.	
				Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...	
			Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	
			Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...	
			Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	
			Page 445 lines 24-27.	... instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,...	
			Page 446 lines 18-23.	... controller, 20, ... causes recorder/player,	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
					217, to record said information of the "Wall Street Week" program.
299. The method of claim 282, wherein said processor processes a datum designating at least one channel of one of a	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and</p>	

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
		Reference	Language	Reference	Language
<p>multichannel cablecast and a multichannel broadcast signal, said method further comprising the step of</p> <p>controlling a selective transfer device to communicate to one of a storage device and a television monitor said at least one channel designated by said processed datum.</p>	Column 6 lines 23-26.	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p> <p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p>	<p>Page 439 lines 14-15.</p> <p>Page 29 lines 4-7.</p> <p>Page 437 lines 1-6.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p>	



Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
			Page 445 line 35 to page 446 line 1.	... and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...

300. A method of controlling	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert,
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Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Language	Reference
as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.		
Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.		
And the Fig. 1C combining is displayed.		
Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.		
Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.		
Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio		

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
passing and		Column 7 lines 47-49.	input is shown in Figure 1. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	programming and a broadcast television input. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
executing instructions and		Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 10-18.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:		Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
receiving one of a broadcast transmission and a cablecast transmission;		Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>demodulating said one of a broadcast transmission and a cablecast transmission to detect an information transmission thereon,</p> <p>said information transmission including an instruct signal which is effective to coordinate a presentation</p> <p><u>ONE OF:</u></p> <p>of output materials communicated at least one of from different sources</p>	<p>Column 6 lines 45-48.</p> <p>Column 19 lines 60-63.</p>	<p>The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 34 lines 31-35.</p> <p>Page 59 lines 29-33.</p>	<p>The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>	
	<p>Column 19 line 53-56.</p>	<p>Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.</p>	<p>Page 25 lines 26-33.</p>	<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the</p>	

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Reference	Language
	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p>	<p>video screen of TV monitor, 202M.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
<p>and at different times;</p>	<p>Column 19 lines 35-41.</p>	<p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.</p>	<p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 449 lines 13-35.</p>	<p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the A T&amp;T news item and caused selected stations to select and process, in their specific</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
<u>OR:</u> of output materials communicated at least one of from different sources and at different times;	Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
detecting said instruct signal on said information transmission and passing said instruct signal to said processor;	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 7 lines 6-11.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.	Page 29 line 33 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
delaying, under control of said processor, the passing of said instruct signal to a controllable apparatus;	Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
passing said instruct signal to said controllable apparatus	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
on the basis of said timing signal; and	Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and <b>when</b> and <b>where</b> and how to determine which signals to pass to buffer/comparator, 14.	Page 33 lines 18-20.  Page 149 lines 8-15.	<p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...</p> <p>Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, to <i>execute particular preprogrammed transfer- and-meter instructions</i> ...</p> <p>Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message <i>under control of said transfer-and-meter instructions</i> commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence <i>executing the meter instructions of said transfer-and-meter instructions</i>. Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p>
			For example, page 150 lines 29-35.	
			For example, page 152 line 19 to page 153 line 1.	



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
		Column 8 lines 56-58. See Fig. 1.	To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus.	Page 33 lines 18-21. See Fig. 2.	Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.
coordinating said presentation of output materials based on said instruct signal.		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2.  Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...  Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

			Page 451 line 3.	And the Fig. 1C combining is displayed.
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301. The method of claim 300, further comprising the steps of: detecting said timing signal in said information transmission; passing said timing signal to said clock; and timing, under control of said clock, the passing of said instruct signal based on said timing signal.	Column 2 line 67 to column 3 line 3.	... or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.	Page 14 lines 30-32.	... or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.

302. A method of controlling at least	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
one of a plurality of receiver stations each of said at least one of a plurality of receiver stations		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	6, and page 90 lines 4-11.  Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.  Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
including at least one of a broadcast and a cablecast mass medium program receiver,		Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 4-15.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
at least one output device,		Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
a control signal detector,		Column 6 lines 50-53.	These separate detectors are designed to act on the particular frequency ranges in which the encoded information may be found.	Page 35 lines 1-4.	The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at least one processor capable of responding to an instruct signal,	Column 20 lines 31-33.	...	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
wherein each of said at least one of a plurality of receiver stations is adapted to detect and respond to at least one instruct signal, said method comprising the steps of:	See Fig. 1.			See Fig. 2.	
receiving at one of a broadcast and a cablecast transmitter station a first instruct signal which is effective at said at least one of a plurality of receiver stations to	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
coordinate a presentation of output materials	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<p><u>ONE OF:</u></p> <p>communicated at least one of from different sources</p>		processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		<p>and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>
			Page 26 lines 4-11.	
			Page 451 line 3.	
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	<p>During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.</p>
	Column 19 lines 60-63.	At this point, an instruction signal is	Page 59 lines 29-33.	A SPAM message is the modality whereby the

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
at different times and  <u>OR:</u>  communicated at least one of from different sources			generated in the television studio originating the programming and is transmitted in the programming transmission.		original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.  At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.  The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
		Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	Page 25 line 34 to page 26 line 1.  Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.  Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
		Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>at different times and</p> <p>delivering said first instruct signal to a transmitter;</p>	<p>Column 19 lines 35-37.</p> <p>Column 10 lines 40-47.</p>	<p>Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.</p> <p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to</p>	<p>Page 449 lines 13-26.</p> <p>Page 324 line 31 to page 325 line 4.</p>	<p>AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.		78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
receiving at said transmitter station at least one first control signal which at said at least one of a plurality of receiver stations operates to communicate said first instruct signal to said at least one processor; and	Column 10 lines 61-63.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.  Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
transferring said at least one control signal to said transmitter,		Column 10 lines 40-47.	<p>embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	<p>Page 324 line 31 to page 325 line 4.</p>	<p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>
	said transmitter transmitting said first instruct signal and said at least one first control signal.	Column 11 lines 41-43.	<p>... controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 328 lines 11-13.</p>	<p>... computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...</p>
		Column 10 lines 49-52.	<p>When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.</p>	<p>Page 325 lines 6-9.</p>	<p>When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.</p>
303. The method of claim 302, wherein at least one of said first instruct signal		Column 19 lines 60-62.	<p>At this point, an instruction signal is generated in the television studio originating the programming ...</p>	<p>Page 59 lines 29-33.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
				<p>Page 25 lines 34-35.</p>	<p>At this point, an instruction signal is generated at said program originating studio, ...</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
and identification data in respect of said instruct signal				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
		Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
	is embedded one of in a television signal and in a signal containing a television program.	Column 4 lines 5-6.  Column 19 lines 62-63	These techniques employ signals embedded in programs.  ... and [the instruction signal] is transmitted in the programming transmission.	Page 37 line 26 to page 38 line 8.  Page 13 lines 25-26.  Page 25 line 34 to page 26 line 1.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.  The present invention employs signals embedded in programming.  ... an instruction signal is ... embedded in the programming transmission, and transmitted.
304. The method of claim 302, wherein a switch communicates signals selectively between			Matrix Switch, 75, in Fig. 3B.		Matrix Switch, 75, in Fig. 6A.
(i) said one of a			TV receiver ,53, in Fig. 3A.		TV receiver ,53, in Fig. 6A.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
broadcast and a cablecast mass medium program receiver and (ii) one of a memory and a recorder and (iii) said transmitter, said method further comprising the step of:			VTR, 78, in Fig. 3B.  Recorder and Player, 76, in Fig. 3B.  Cable Channel Modulator, 83, in Fig. 3C.	Page 324, line 35.	78, in Fig. 6A. recorder/players, 76 and 78  Recorder and Player, 76, in Fig. 6A.  Cable Channel Modulator, 83, in Fig. 6B.
	detecting a second control signal which is effective at said transmitter station to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.  Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.  By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.  SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...
				Page 84 lines 26-28.	
				Page 28 lines 26-27.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

cause communication.	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 49 lines 26-27.  Page 328 lines 14-16.  Page 328 line 31 to page 329 line 1.	Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...  In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
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305. The method of claim 302, wherein a controller controls a switch to communicate to said transmitter one of a mass medium program and	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
said at least one first control signal, further comprising the step of	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
detecting a second control signal which is effective at said transmitter station to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
instruct transmission.	Column 11 lines 50-57.	recorder/players, 76 and 78.     ... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
			Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to

Claim Language		Support to parent application filed November 3, 1981		Support to instant specification	
	Reference	Language	Reference	Language	
				matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
306. The method of claim 302, further comprising the step of transmitting to at least one of said plurality of receiver stations	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...	
at least one datum that designates	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
one of a time and a channel of transmission of said first instruct signal.	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
			<p>Page 436 line 9 to page 437 line 3.</p>	<p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match with said second instance.</b></p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
			<p>Page 439 lines 14-15.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<p>307. The method of claim 302, wherein a switch communicates signals selectively between</p> <p>(i) said one of a broadcast and a cablecast mass medium program receiver and</p> <p>(ii) one of a memory and</p> <p>a recorder and</p> <p>(iii) said transmitter, said method further comprising the step of</p> <p>determining a signal source from which to communicate at least one of said first instruct signal and said at least one first control signal to a transmitter.</p>	<p>Column 11 lines 50-54.</p>	<p>Matrix Switch, 75, in Fig. 3B.</p> <p>TV receiver ,53, in Fig. 3A.</p> <p>VTR, 78, in Fig. 3B.</p> <p>Recorder and Player, 76, in Fig. 3B.</p> <p>Cable Channel Modulator, 83, in Fig. 3C.</p> <p>For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...</p>	<p>Page 324, line 35.</p> <p>Page 328 lines 22-31.</p>	<p>Matrix Switch, 75, in Fig. 6A.</p> <p>TV receiver ,53, in Fig. 6A.</p> <p>78, in Fig. 6A. recorder/players, 76 and 78</p> <p>Recorder and Player, 76, in Fig. 6A.</p> <p>Cable Channel Modulator, 83, in Fig. 6B.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.</p>
<p>308. The method of claim 302, wherein a switch communicates signals selectively between</p>		<p>Matrix Switch, 75, in Fig. 3B.</p>		<p>Matrix Switch, 75, in Fig. 6A.</p>



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>(i) said one of a broadcast and a cablecast mass medium program receiver and</p> <p>(ii) one of a memory and</p> <p>a recorder and</p> <p>(iii) said transmitter, said method further comprising the step of controlling said switch to communicate at least one of said first instruct signal and said at least one first control signal to said transmitter</p>	<p>Column 11 lines 54-57.</p>	<p>TV receiver, 53, in Fig. 3A.</p>	<p>TV receiver, 53, in Fig. 6A.</p>	<p>Page 324, line 35.</p>	<p>78, in Fig. 6A. recorder/players, 76 and 78</p> <p>Recorder and Player, 76, in Fig. 6A.</p> <p>Cable Channel Modulator, 83, in Fig. 6B.</p>
		<p>... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>VTR, 78, in Fig. 3B.</p> <p>Recorder and Player, 76, in Fig. 3B.</p> <p>Cable Channel Modulator, 83, in Fig. 3C.</p>		
<p>in response to a second control signal which is effective at said transmitter station to instruct communication;</p>	<p>Column 11 lines 38-46.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 84 lines 26-28.  Page 28 lines 26-27.  Page 49 lines 26-27.  Page 328 lines 14-16.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....  ... monitor information that identifies what programming is available, ...  Meter-monitor segments contain meter information and/or monitor information.  Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
309. The method of claim 302, wherein a switch communicates signals selectively between  (i) said one of a broadcast and a cablecast mass medium program receiver and  (ii) one of a memory and  a recorder and  (iii) said transmitter, said method further comprising the step of controlling said switch to communicate at least one of said first instruct	Column 11 lines 61-64.	Matrix Switch, 75, in Fig. 3B.  TV receiver ,53, in Fig. 3A.  VTR, 78, in Fig. 3B.  Recorder and Player, 76, in Fig. 3B.  Cable Channel Modulator, 83, in Fig. 3C.  ... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
signal and said at least one first control signal from a signal source;.			designated recorder/player, 76 or 78, ...		transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
<p>310. The method of claim 302, wherein a switch communicates signals selectively between</p> <p>(i) said one of a broadcast and a cablecast mass medium program receiver and</p> <p>(ii) one of a memory and</p> <p>a recorder and</p> <p>(iii) said transmitter, said method further comprising the step of</p> <p>controlling said switch to communicate to said memory or recorder at least one of said first instruct signal and said at least one first control signal.</p>		Column 11 lines 61-64.	<p>Matrix Switch, 75, in Fig. 3B.</p> <p>TV receiver ,53, in Fig. 3A.</p> <p>VTR, 78, in Fig. 3B.</p> <p>Recorder and Player, 76, in Fig. 3B.</p> <p>Cable Channel Modulator, 83, in Fig. 3C.</p> <p>... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...</p>	<p>Page 324, line 35.</p> <p>Page 329 lines 13-20.</p>	<p>Matrix Switch, 75, in Fig. 6A.</p> <p>TV receiver ,53, in Fig. 6A.</p> <p>78, in Fig. 6A. recorder/players, 76 and 78</p> <p>Recorder and Player, 76, in Fig. 6A.</p> <p>Cable Channel Modulator, 83, in Fig. 6B.</p> <p>... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>
<p>311. The method of claim 302, wherein a controller controls a switch to communicate to said transmitter one</p>		Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch,

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
of a mass medium program and  said at least one first control signal, further comprising the step of inputting to said controller a second control signal which is effective to		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.  ... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
control said switch.		Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53,	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
		should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
312. The method of claim 302, wherein a controller controls a switch to communicate to said transmitter one of a mass medium program and	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
said at least one first control signal, further comprising the step of	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
controlling said switch to communicate at least one of said first instruct signal and	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
said at least one first control signal according to a transmission schedule.	Column 11 lines 38-43.	from TV receiver, 53, to the output that leads to modulator, 87.	preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language	
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	
313. The method of claim 302, wherein a controller controls a switch to communicate to said transmitter one of a mass medium program and	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
said at least one first control signal, further comprising the step of	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.	
controlling said switch to communicate at least one of said first instruct signal and said at least one first control signal from one of a plurality of instruct signal sources.	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	
	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ....	
314. The method of claim 302, wherein a controller controls a switch to communicate to said transmitter one	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch,	

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
<p>of a mass medium program and</p> <p>said at least one first control signal, further comprising the step of</p> <p>controlling said switch to communicate at least one of said first instruct signal and said at least one first control signal to one of</p>	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.
<p>a plurality of transmitters.</p>	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.
<p>75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>			



Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
315. The method of claim 302, further comprising the step of transmitting to at least one of said plurality of receiver stations	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...	
at least one datum that	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
specifies one of the title of and subject matter contained in a mass medium program associated with said first instruct signal.	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.	
			Page 436 line 9 to	Receiving said Select-WSW-Program-Unit	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
				page 437 line 3.	message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.
				Page 439 lines 14-15.	...to receive the transmission of cable channel 13,...
316. The method of claim 302, further comprising the step of transmitting to at least one of said plurality of	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
receiver stations					processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
a second control signal to cause said receiver station to tune to one of a broadcast and a cablecast transmission containing a specific instruct signal.	Column 19 lines 12-15.	Microcomputer, 205, instructs signal processor, 200, to pass all program and channel identifiers on all programming being cablecast on the multi-channel system.		Page 288 lines 13-20.	As Fig. 4 shows, ...in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
				Page 445 lines 8-10.	... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...
				Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
				Page 248 lines 22-26.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
				Page 250 lines 13-16.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
				Page 252 lines 15-35.	Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
			Page 267 lines 20-28.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
	Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...	Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
			Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language

				receive the transmission of cable channel 13;...
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**APPENDIX B**

**PATENTABLE SUBJECT MATTER OF  
INSTANT CLAIMS OVER  
APPLICANTS' PATENTED CLAIMS**

The following charts provide a claim by claim comparison of each of Applicants' instant independent claims to of Applicant's independent patented claims<sup>32</sup> as specified in Appendix A of the Office Action. The Office Action stated in paragraphs 22-23 that claims 6-316 are rejected under the judicially created doctrine of obviousness-type double patenting over any single claim or combination of claims of every claim of Applicants' six issued patents. However, the Office Action only compared four of Applicants' patented claims to Applicants' instant independent claims<sup>33</sup>. There was no other analysis to any other of Applicants' patented claims with those of the instant application.

Applicants provide an analysis in Appendix B to show that the instant independent claims are patentably distinct from the specified patented independent claims in Appendix A of the Office Action.

For the Examiner's convenience only, Applicants have underlined portions in the left columns of the instant independent claims to designate the clearest and most succinct portions of the claim language that Applicants believe are patentably distinct from the patented independent claims in the right columns. Applicants assert that any lack of underlining in the instant independent claims in no way indicates these portions are common to the subject matter of the patented claims.

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<sup>32</sup> Claim 1 of U.S. Pat. No. 4,704,725, Claim 1 of U.S. Pat. No. 5,109,414, Claim 1 of U.S. Pat. No. 4,694,490, & Claim 14 of U.S. Pat. No. 4,965,825.

<sup>33</sup> Applicants instant independent claims 6-12, 16, 19, 23, 25, 30-36, 40, 43, 46-47, 83-84, 90, 94-100, 104, 108, 112-113, 144-147, 151, 155, 158, 163, 167-168, 172, 199, 215 & 235.

*Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims*

Application Claim 6	U.S. Pat. No. 4,694,490, Claim 1
<p>6. A method of generating and delivering an individualized mass medium programming presentation at a receiver station, said receiver station having a receiver for receiving a mass medium programming signal, a computer for generating and communicating information, and one or more output devices operatively connected to said receiver and said computer for delivering to a viewer mass medium programming and computer information, with said computer comprising one or more data storage locations, said method comprising the steps of:</p> <p><u>storing a timing signal and viewer interest identification data specifying a plurality of different viewer interests; controlling said computer a first time based on a comparison of said timing signal or said viewer interest identification data to other data, said first step of controlling comprising:</u></p> <p>(1) <u>inputting into said computer further data designating a viewer interest of said plurality of different viewer interests or a time;</u></p> <p>(2) <u>selecting a plurality of signals, each selected signal including data, mass medium programming, or a control signal respecting said viewer interest; and</u></p> <p>(3) <u>storing each selected signal at a storage location;</u></p> <p><u>controlling said computer a second time based on said comparison, said second step of controlling comprising:</u></p> <p>(1) <u>selecting one or more computer programming instructions;</u></p> <p>(2) <u>generating mass medium programming presentation information content in respect to a second viewer interest of said plurality of different viewer interests; and</u></p> <p>(3) <u>preparing to communicate said generated mass medium programming presentation information content upon instruction;</u></p> <p><u>controlling said computer a third time based on said timing signal or said comparison, said third step of controlling comprising:</u></p> <p>(1) <u>selecting a portion of said mass medium programming presentation information content;</u></p> <p>(2) <u>selecting a location; and</u></p> <p>(3) <u>communicating said selected mass medium programming presentation information content to said selected location; and</u></p> <p><u>presenting to a subscriber at a controlled time said mass medium programming with said generated mass medium programming presentation information content, with said mass medium programming and said generated mass medium programming presentation information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>



devices.	
Application Claim 7	U.S. Pat. No. 4,694,490, Claim 1
<p>7. A method of generating and delivering an individualized mass medium programming presentation at a receiver station, said receiver station having a receiver for receiving a mass medium programming signal, a computer for generating and communicating information, and one or more output devices operatively connected to said receiver and said computer for delivering to a viewer mass medium programming and computer information, with said computer comprising one or more data storage locations, said method comprising the steps of:</p> <p><u>storing a timing signal and a plurality of identification signals specifying different viewer interests;</u>  <u>controlling said computer a plurality of times, each time based on a comparison of said timing signal or identification signals to other data, said first step of controlling comprising each time:</u>            (1) <u>inputting further data designating a viewer interest of said different viewer interests or a time;</u>            (2) <u>selecting a signal, each selected signal including data, information content, or a control signal respecting mass medium programming; and</u>            (3) <u>storing each selected signal at a storage location,</u>  <u>a portion of said selected stored signals designating said different viewer interests;</u>  <u>controlling said computer based on said comparison, said second step of controlling comprising:</u>            (1) <u>selecting one or more computer programming instructions;</u>            (2) <u>generating mass medium programming presentation information content with respect to a second viewer interest; and</u>            (3) <u>preparing to communicate said generated mass medium programming presentation information content upon instruction;</u>  <u>controlling said computer based on said timing signal or said comparison, said third step of controlling comprising:</u>            (1) <u>selecting a portion of said mass medium programming presentation information content;</u>            (2) <u>selecting a location; and</u>            (3) <u>communicating said selected mass medium programming presentation information content to said selected location; and</u>  <u>presenting to a subscriber at a controlled time said mass medium programming with said generated mass medium programming presentation information content, with said mass medium programming and said generated mass medium programming presentation information content being outputted to said subscriber either as a</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,            transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,            receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,            detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

*Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims*

combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.

Application Claim 8	U.S. Pat. No. 4,704,725, Claim 1
<p>8. A method of generating and delivering an individualized mass medium programming presentation at a receiver station, said receiver station having a receiver for receiving a mass medium programming signal, a computer for generating and communicating information, and one or more output devices operatively connected to said receiver and said computer for delivering to a viewer mass medium programming and computer information, with said computer comprising one or more data storage locations, said method comprising the steps of:</p> <p><u>storing a timing signal and identification data, each identification datum specifying a plurality of different viewer interests;</u></p> <p><u>controlling said computer a first time based on a comparison of said timing signal or identification data to other data, said first step of controlling comprising:</u></p> <p><u>(1) inputting to said computer data designating a viewer interest of said plurality of different viewer interests or a time;</u></p> <p><u>(2) selecting a first signal, each selected first signal including data, information content, or a control signal respecting a mass medium programming presentation;</u></p> <p><u>and</u></p> <p><u>(3) storing each selected first signal at a storage location;</u></p> <p><u>controlling said computer a second time based on said comparison, said second step of controlling comprising:</u></p> <p><u>(1) inputting data designating a second viewer interest of said plurality of different viewer interests or a time;</u></p> <p><u>(2) selecting a second signal, each selected second signal including information content or a control signal respecting a mass medium programming presentation;</u></p> <p><u>and</u></p> <p><u>(3) communicating each selected second signal to a processor and a storage location;</u></p> <p><u>controlling said computer a third time based on said comparison, said third step of controlling comprising:</u></p> <p><u>(1) inputting data designating a third viewer interest or a time;</u></p> <p><u>(2) selecting a third signal, each selected third signal including one of mass medium programming presentation information content and a control signal;</u></p> <p><u>and</u></p> <p><u>(3) communicating each selected third signal to one of a processor and an output device;</u></p> <p><u>presenting to a subscriber said mass medium programming with said mass medium programming presentation information content, with said mass medium programming and said said mass medium</u></p>	<p>1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,</p> <p>transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and</p> <p>causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

*Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims*

programming presentation information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.

Application Claim 9	U.S. Pat. No. 4,704,725, Claim 1
<p>9. A method of delivering a mass medium programming presentation at a receiver station, said receiver station having a receiver for receiving a mass medium programming signal, programmable apparatus for controlling delivery of information, and one or more output devices operatively connected to said receiver and said programmable apparatus for delivering to a viewer said mass medium programming presentation, said method comprising the steps of:</p> <p><u>storing a timing signal and signal identification data designating a specific signal kind;</u>  <u>controlling said receiver station a first time based on said step of storing, said first step of controlling comprising:</u>            (1) <u>selecting a first signal, each selected first signal including data in respect of mass medium programming presentation; and</u>  <u>inputting each selected first signal to said programmable apparatus in order to program said programmable apparatus to respond to a specific signal kind;</u>  <u>controlling said receiver station a second time based on said step of storing, said second step of controlling comprising:</u>            (1) <u>selecting a second signal, each selected second signal including an information content portion and a control portion respecting a mass medium programming presentation; and</u>            (2) <u>communicating at least said control portion of each selected second signal to said programmable apparatus;</u>  <u>controlling said receiver station a third time based on said step of storing said third step of controlling comprising:</u>            (1) <u>identifying a third signal, each identified third signal being of a mass medium programming a signal kind; and</u>            (2) <u>communicating each identified third signal to one of said one or more output devices;</u>  <u>controlling said receiver a fourth time based on said step of storing, said fourth step of controlling comprising:</u>            (1) <u>communicating to said programmable apparatus a fourth signal, each communicated fourth signal being of a kind other than a mass medium programming signal; and</u>            (2) <u>communicating mass medium programming presentation information content to one of said one or more output devices in response to each communicated fourth signal; and</u>  <u>presenting to a subscriber a mass medium programming with said mass medium programming presentation</u></p>	<p>1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,</p> <p>transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and</p> <p>causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

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information content, with said mass medium programming and said mass medium programming presentation content information content being outputted to said subscriber either as a combined or sequential presentation at said one of said one or more output devices.

**Application Claim 10**

10. A method of generating and delivering an individualized mass medium programming presentation at a receiver station, said receiver station having a receiver for receiving a mass medium programming signal, a computer for generating and communicating information, and one or more output devices operatively connected to said receiver and said computer for delivering to a viewer a mass medium programming and computer information, with said computer comprising one or more data storage locations, said method comprising the steps of:  
storing a timing signal and a plurality of a first data, each first datum designating a different type of signal; controlling said computer one or more times based on a comparison, said first step of controlling comprising:  
 (1) selecting a first signal, each selected first signal including data, information content, or a control signal respecting a mass medium programming presentation;  
and  
 (2) storing each selected first signal at a storage location;  
controlling said computer based on said comparison, said second step of controlling comprising:  
 (1) selecting a second signal, each selected second signal including information content or a control signal respecting a mass medium programming presentation;  
and  
 (2) communicating each selected second signal to a processor or an output device;  
controlling said computer based on said comparison, said third step of controlling comprising:  
 (1) identifying a third signal, each identified third signal being a control signal designating a signal type;  
and  
 (2) communicating each identified third signal to a processor or an output device;  
controlling said computer based on said comparison, said fourth step of controlling comprising:  
 (1) selecting a first signal or a timing signal; and  
 (2) generating or communicating some mass medium programming information content in response to a control signal; and  
presenting to a subscriber a mass medium programming with said mass medium programming information content, with said mass medium programming and said mass medium programming information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel

**U.S. Pat. No. 4,704,725, Claim 1**

1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:

transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,  
 transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,  
 detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and  
 causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

presentations at a plurality of output devices.	
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Application Claim 11	U.S. Pat. No. 4,704,725, Claim 1
<p>11. A method of providing data of interest to a receiver station from a remote data source, said data of interest for use at the receiver station in generating or outputting a receiver specific datum, said method comprising the steps of:</p> <p><u>storing data at said remote data source;</u>  <u>receiving at said remote data source a query from said receiver station;</u>  <u>transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing some of said transmitted data;</u>  <u>transmitting from a second remote source to said receiver station a signal which controls said receiver station to select and process an instruct signal which is effective at said receiver station to coordinate presentation of said data with a separate predetermined presentation sequence.</u></p>	<p>1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,</p> <p>transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and</p> <p>causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 12	U.S. Pat. No. 4,704,725, Claim 1
<p>12. A method of communicating subscriber station information from a subscriber station to one or more remote data collection stations, said method comprising the steps of:</p> <p><u>inputting a viewer's or participant's reaction at a subscriber station;</u>  <u>receiving at said subscriber station information that designates an instruct signal to process or an output to deliver in consequence of subscriber input;</u>  <u>determining the presence of said subscriber input at said subscriber station by processing said viewer's or participant's reaction;</u>  <u>processing an instruct signal which is effective to coordinate presentation of data with a separate predetermined presentation sequence at said subscriber</u></p>	<p>1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,</p> <p>transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said</p>

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<u>station in consequence of said step of determining; and transferring from said subscriber station to one or more remote data collection stations an indication confirming delivery of said instruct signal based on said step of processing or confirming delivery.</u>	selected stations, and causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.
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Application Claim 16	U.S. Pat. No. 4,965,825, Claim 14
<p>16. A method of controlling a remote intermediate transmitter station to communicate data to one or more receiver stations, with said remote intermediate transmitter station including a broadcast or cablecast transmitter, a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter, a data receiver, a control signal detector, and a controller or computer capable of controlling one or more of said selective transfer devices, said remote intermediate transmitter station adapted to detect one or more control signals, to control the communication of said data, and to deliver said data to said broadcast or cablecast transmitter, said method comprising the steps of:</p> <p>(1) <u>receiving said data to be transmitted by the remote intermediate transmitter station and delivering said data to a data transmitter, said data comprising an instruct signal which is effective at the receiver station to coordinate presentation of said data with a separate predetermined presentation sequence;</u></p> <p>(2) <u>receiving said one or more control signals which at the remote intermediate transmitter station operate to control the communication of said data; and</u></p> <p>(3) <u>transmitting said one or more control signals from said data transmitter before a specific time.</u></p>	<p>14. A method of processing signals including:</p> <p>(a) the step of receiving a carrier transmission;</p> <p>(b) the step of demodulating said carrier transmission to detect an information transmission thereon;</p> <p>(c) the step of detecting and identifying embedded signals on said information transmission;</p> <p>(d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals;</p> <p>(e) the step of controlling said devices based on the instructions within said embedded signals; and</p> <p>(f) the step of recording the receipt of and passing to said devices of said embedded signals.</p>

Application Claim 19	U.S. Pat. No. 4,965,825, Claim 14
<p>19. A method of controlling a receiver station including the steps of:</p> <p><u>detecting the presence or absence of a broadcast or cablecast control signal;</u></p> <p><u>inputting an instruct-to-react signal to a processor based on said step of detecting;</u></p> <p><u>controlling said processor to output specific information in response to said step of inputting; and</u></p> <p><u>coordinating presentation of data with a separate predetermined presentation sequence based on information received from said processor based on said step of controlling.</u></p>	<p>14. A method of processing signals including:</p> <p>(a) the step of receiving a carrier transmission;</p> <p>(b) the step of demodulating said carrier transmission to detect an information transmission thereon;</p> <p>(c) the step of detecting and identifying embedded signals on said information transmission;</p> <p>(d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals;</p> <p>(e) the step of controlling said devices based on the instructions within said embedded signals; and</p> <p>(f) the step of recording the receipt of and passing to said devices of said embedded signals.</p>

Application Claim 23	U.S. Pat. No. 4,965,825, Claim 14
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<p>23. A method of controlling a receiver station, said receiver station having a processor for passing and executing instructions and a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:  <u>receiving a broadcast or cablecast transmission;</u>  <u>demodulating said broadcast or cablecast transmission to detect an information transmission therein, said information transmission comprising an instruct signal which is effective to coordinate presentation of said with a separate predetermined presentation sequence;</u>  <u>detecting said instruct signal in said information transmission and passing said instruct signal to said processor;</u>  <u>delaying, under processor control, passing said instruct signal to a controllable apparatus;</u>  <u>passing said instruct signal to said controllable apparatus based on a timing signal; and</u>  <u>controlling said controllable apparatus based on said instruct signal.</u></p>	<p>14. A method of processing signals including:</p> <p>(a) the step of receiving a carrier transmission;  (b) the step of demodulating said carrier transmission to detect an information transmission thereon;  (c) the step of detecting and identifying embedded signals on said information transmission;  (d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals;  (e) the step of controlling said devices based on the instructions within said embedded signals; and  (f) the step of recording the receipt of and passing to said devices of said embedded signals.</p>
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Application Claim 25	U.S. Pat. No. 4,704,725, Claim 1
<p>25. A method of communicating data and update material to one or more mass medium programming receiver stations each of which includes a broadcast or cablecast data receiver, a data storage device, a control signal detector, a computer capable of processing data, said receiver stations adapted to detect and respond to one or more instruct signals and to store data for subsequent processing, said method comprising the steps of:</p> <p>(1) <u>receiving said data to be transmitted and delivering the data to a transmitter;</u>  (2) <u>receiving said one or more instruct signals which at the receiver station are effective to coordinate presentation of said data with a separate predetermined presentation sequence;</u>  (3) <u>transferring said one or more instruct signals to a transmitter; and</u>  (4) <u>transmitting an information transmission comprising said data and said one or more instruct signals.</u></p>	<p>1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,  transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,  detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and  causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 30	U.S. Pat. No. 4,694,490, Claim 1
<p>30. A method of delivering a mass medium programming presentation comprising mass medium</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of</p>

<p>programming content and receiver station programming information content at a receiver station, said receiver station having a receiver for receiving a mass medium programming signal, a computer for communicating information, and one or more output devices operatively connected to said receiver and said computer for delivering to a viewer said mass medium programming presentation, with said computer comprising one or more data storage locations, said method comprising the steps of:</p> <p><u>storing a timing signal specifying a time or a series of times;</u>  <u>controlling said computer a first time based on said timing signal, said first step of controlling comprising:</u>  <u>(1) making a comparison between stored identification data designating a viewer interest and received data including timing data;</u>  <u>(2) selecting a portion of said received data based on said comparison; and</u>  <u>(3) storing said selected portion at a one of said one or more storage locations;</u>  <u>controlling said computer a second time based on said timing signal, said second step of controlling comprising:</u>  <u>(1) selecting a portion of computer programming instructions;</u>  <u>(2) generating or retrieving receiver station programming information content based on said selected portion of data and in accordance with said portion of instructions; and</u>  <u>(3) preparing to communicate said receiver station programming information content;</u>  <u>controlling said computer a third time based on said timing signal, said third step of controlling comprising:</u>  <u>(1) selecting a portion of at least one of said mass medium programming content and said receiver station programming information content;</u>  <u>(2) selecting one or more output devices;</u>  <u>(3) communicating said selected content to said selected one or more output devices;</u>  <u>thereby presenting to a subscriber at a controlled time mass medium programming with mass medium programming content and receiver station programming information content, said mass medium programming content and said receiver station programming information content being outputted to said subscriber either as a combined or sequential presentation at an output device or as parallel presentations at a plurality of output devices.</u></p>	<p>which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 31	U.S. Pat. No. 4,694,490, Claim 1
<p>31. <u>An apparatus for coordinating a programming presentation at a mass medium programming receiver station comprising:</u>  <u>a first output device for outputting to a subscriber mass</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit</p>



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medium programming;  
a storage device for storing a timing control signal, said timing control signal comprising a datum designating a time (a) to obtain from a first remote station some information to be processed for subsequent output in coordination with said mass medium programming or (b) to select some information associated with a coordinated programming presentation when received from a remote station;  
a processor operatively connected to said storage device for receiving from one of said first remote station and a second remote station one or more instructions or identification data that designate one or more outputs to coordinate with said mass medium programming;  
a receiver operatively connected to said processor for receiving a sequence of instructions which are effective to control the presentation of coordinated output;  
a controller or computer operatively connected to said receiver section for controlling or communicating information to an output device; and  
a second output device operatively connected to said controller or computer for presenting said one or more outputs coordinated with said mass medium programming.

overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  
transmitting a video signal containing a television program signal to said receivers,  
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  
detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

**Application Claim 32**

32. A method of delivering an individualized mass medium programming presentation comprising mass medium programming content and receiver station programming information content at a receiver station, said receiver station having a receiver for receiving a mass medium programming signal, a computer for processing and communicating information, and one or more output devices operatively connected to said receiver and said computer for delivering to a subscriber said presentation, with said computer comprising one or more data storage locations, said method comprising the steps of:

receiving a plurality of timing signals or a timing signal specifying a series of times;  
detecting the presence of an instruct-to-coordinate signal received from a remote station or from a mass medium programming source, said instruct-to-coordinate signal designating a specific one of said plurality of timing signals or a specific one of said series of times;  
selecting at a first controlled time one or more data to serve as a basis for a portion of said individualized mass medium programming presentation; and subsequently

**U.S. Pat. No. 4,694,490, Claim 1**

1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  
transmitting a video signal containing a television program signal to said receivers,  
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  
detecting the presence of said instruct-to-overlay signal

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<p><u>outputting to said subscriber at a second controlled time in the course of a mass medium programming presentation processed information of said selected one or more data, at least one of said first controlled time and said second controlled time being in response to said instruct-to-coordinate signal and said processed information of said selected one or more data being outputted either as combined or sequential output with said mass medium programming or at a first of said one or more output devices concurrently with said mass medium programming outputted at a second of said one or more output devices.</u></p>	<p>at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 33	U.S. Pat. No. 4,694,490, Claim 1
<p>33. <u>An apparatus for providing a coordinated programming presentation at a mass medium programming receiver station comprising: a first receiver for receiving mass medium programming at said mass medium programming receiver station; a first output device for outputting said mass medium programming; a first processor for receiving from a remote station or from a mass medium programming source an instruct-to-coordinate signal that designates one or more data to select and input to a second processor; a second receiver operatively connected to said first processor for receiving said one or more data, said one or more data being associated with said coordinated programming presentation, and communicating said data to said second processor at a specific time; said second processor operatively connected to said second receiver for processing said designated data to output coordinated presentation content; and a second output device operatively connected to said second processor for outputting said coordinated presentation content.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 34	U.S. Pat. No. 4,694,490, Claim 1
<p>34. A method of delivering an individualized mass medium program presentation at a receiver station, said receiver station having at least one receiver for receiving mass medium program signals, a computer for processing and communicating information, and one or</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers,</p>

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more output devices operatively connected to said receiver and said computer for delivering to a subscriber said presentation, with said computer comprising one or more data storage locations, said method comprising the steps of:

receiving data to be processed or communicated in response to an instruct-to-coordinate signal;  
detecting the presence of said instruct-to-coordinate signal received from a remote station or from a mass medium program source, said instruct-to-coordinate signal designating one or more mass medium programs to be coordinated;  
selecting in response to said instruct-to-coordinate signal one or more of said received data to serve as a basis for a portion of said individualized mass medium program presentation; and subsequently  
outputting to said subscriber processed information of said selected one or more data in the course of the presentation of said one or more mass medium programs, said processed information of said selected one or more data being outputted at one of said one or more output devices either as a combined or sequential output with said one or more mass medium programs or at a first of said one or more output devices concurrently or sequentially with said one or more mass medium programs outputted at a second of said one or more output devices.

said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:

transmitting a video signal containing a television program signal to said receivers,  
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  
detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

Application Claim 35	U.S. Pat. No. 4,694,490, Claim 1
<p>35. A method of providing data of interest to a receiver station from a remote data source, said data of interest for use at the receiver station in generating or outputting a receiver specific datum, said method comprising the steps of:</p> <p><u>storing data at said remote data source;</u>  <u>receiving at said remote data source a query from said receiver station;</u>  <u>transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing some of said transmitted data;</u>  <u>transmitting from a second remote source to said receiver station a signal which controls said receiver station to select and process an instruct signal which is effective at said receiver station to coordinate two</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said</p>

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<u>predetermined sequences, at least one of which is based on said selected data.</u>	instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 36	U.S. Pat. No. 4,694,490, Claim 1
<p>36. A method of communicating subscriber station information from a subscriber station to one or more remote data collection stations, said method comprising the steps of:</p> <p>(1) <u>inputting a viewer's or participant's reaction at said subscriber station;</u></p> <p>(2) <u>receiving at said subscriber station at least one datum that designates an instruct signal to process or an output to deliver in consequence of subscriber input;</u></p> <p>(3) <u>determining the presence of said subscriber input at said subscriber station by processing said viewer's or participant's reaction;</u></p> <p>(4) <u>processing said information and coordinating two predetermined sequences at said subscriber station in consequence of said step of determining; and</u></p> <p>(5) <u>transferring from said subscriber station to said one or more remote data collection stations an indication confirming execution of said step of processing.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 40	U.S. Pat. No. 4,694,490, Claim 1
<p>40. A method of controlling a remote intermediate data transmitter station to communicate data to one or more receiver stations, with said remote intermediate data transmitter station including a broadcast or cablecast transmitter for transmitting one or more signals which are effective at a receiver station to instruct a</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific</p>

computer or processor, a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter for communicating data, a data receiver for receiving at least one instruct signal, a control signal detector, and a controller or computer capable of controlling one or more of said selective transfer devices, and with said remote intermediate data transmitter station adapted to detect the presence of one or more control signals, to control the communication of said at least one instruct signal in response to said one or more control signals, and to deliver at its broadcast or cablecast transmitter said at least one instruct signal, said method comprising the steps of:

(1) receiving an instruct signal to be transmitted by the remote intermediate data transmitter station and delivering said instruct signal to at least one origination transmitter, said instruct signal being effective at a receiver station to coordinate two predetermined sequences;

(2) receiving one or more control signals which at the remote intermediate data transmitter station operate to control the communication of said instruct signal; and

(3) transmitting said one or more control signals from said at least one origination transmitter before a specific time.

information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:

transmitting a video signal containing a television program signal to said receivers,  
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  
detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

Application Claim 43	U.S. Pat. No. 4,965,825, Claim 14
<p>43. A method of controlling a receiver station including the steps of: <u>detecting one of the presence and absence of a broadcast or cablecast control signal;</u> <u>inputting an instruct-to-react signal to a processor based on said step of detecting;</u> <u>controlling said processor to output specific information in response to said step of inputting; and</u> <u>coordinating two predetermined sequences on the basis of information received from said processor based on said step of controlling.</u></p>	<p>14. A method of processing signals including:</p> <ul style="list-style-type: none"> <li>(a) the step of receiving a carrier transmission;</li> <li>(b) the step of demodulating said carrier transmission to detect an information transmission thereon;</li> <li>(c) the step of detecting and identifying embedded signals on said information transmission;</li> <li>(d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals;</li> <li>(e) the step of controlling said devices based on the instructions within said embedded signals; and</li> <li>(f) the step of recording the receipt of and passing to said devices of said embedded signals.</li> </ul>
Application Claim 46	U.S. Pat. No. 4,694,490, Claim 1
<p>46. A method of controlling a receiver station, said receiver station having a processor for passing and executing instructions and a clock operatively connected</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the</p>

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<p>to said processor for inputting a timing signal, said method comprising the steps of:</p> <p><u>receiving a broadcast or cablecast transmission;</u>  <u>demodulating said broadcast or cablecast transmission to detect an information transmission thereon, said information transmission comprising an instruct signal which is effective to coordinate two predetermined sequences;</u>  <u>detecting said instruct signal on said information transmission and passing said instruct signal to said processor;</u>  <u>delaying, under processor control, the passing of said instruct signal to a controllable apparatus;</u>  <u>passing said instruct signal to said controllable apparatus on the basis of a timing signal; and</u>  <u>controlling said controllable apparatus based on said instruct signal.</u></p>	<p>computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 47	U.S. Pat. No. 4,694,490, Claim 1
<p>47. A method of controlling at least one of a plurality of receiver stations each of which includes a broadcast or cablecast receiver, a processor, a signal detector, said signal detector adapted to detect signals within a broadcast or cablecast transmission, and said processor programmed to respond to detected signals communicated from said detector, and said method comprising the steps of:</p> <p>(1) <u>receiving at a broadcast or cablecast transmitter station a first instruct signal which is effective at said at least one of a plurality of receiver stations to coordinate two predetermined sequences;</u>  (2) <u>transferring said first instruct signal to a first transmitter;</u>  (3) <u>receiving one or more first control signals at said transmitter station, said control signals addressing said first instruct signal to said processor of at least one</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p>

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<p>specific receiver station; and  <u>(4) transferring said one or more first control signals to one of said first transmitter and a second transmitter, said transmitter station broadcasting or cablecasting said first instruct signal and said one or more first control signals to said plurality of receiver stations.</u></p>	<p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 83	U.S. Pat. No. 4,694,490, Claim 1
<p>83. A method at a receiver station of coordinating the processing of data and television programming to present a locally pertinent output, said method comprising the steps of:</p> <p><u>selecting a datum of interest;</u>  <u>storing the selected datum of interest;</u>  <u>receiving a plurality of units of television programming at the receiver station;</u>  <u>selecting one of the plurality of received units of television programming;</u>  <u>outputting the selected unit of television programming at at least one output device at the receiver station;</u>  <u>receiving a plurality of control signals;</u>  <u>generating a locally pertinent display based on the stored datum of interest;</u>  <u>outputting the locally pertinent display to the at least one output device to present the locally pertinent output comprising the outputted unit of television programming and the outputted locally pertinent display, at least one of said steps of generating and outputting the locally pertinent display being performed in response to at least one of said received plurality of control signals.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 84	U.S. Pat. No. 4,694,490, Claim 1
<p>84. A method of coordinating the output of a local output at a receiver station, said receiver station having a computer for generating said local output, a detector operatively connected to said computer, and at least one</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit</p>

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<p>output device, said method comprising the steps of:</p> <p><u>selecting at least one datum of interest;</u>  <u>storing the selected at least one datum of interest;</u>  <u>receiving a digital information transmission containing (i) programming to be outputted in a television presentation and (ii) a control signal;</u>  <u>detecting the control signal in the digital information transmission;</u>  <u>generating the local output based on said stored selected at least one datum;</u>  <u>outputting to the at least one output device the generated local output based on said step of detecting, to present an output at the at least one output device including the local output.</u></p>	<p>overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 89	U.S. Pat. No. 4,694,490, Claim 1
<p>89. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:</p> <p><u>selecting a datum of interest, said step of selecting comprising:</u>  <u>(a) storing at the receiver station an identification signal identifying the datum of interest;</u>  <u>(b) receiving from a remote data source a plurality of data including the datum of interest, each of said plurality of data comprising an identification signal and an information signal;</u>  <u>(c) comparing the identification signal of the datum of interest to the identification signals of each of the</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal</p>



<p><u>received data;</u>  <u>(d) selecting the datum of interest from the plurality of received data based on said step of comparing;</u>  <u>storing the selected datum of interest;</u>  <u>receiving a plurality of units of television programming at the receiver station;</u>  <u>selecting one of the plurality of received units of programming;</u>  <u>outputting the selected unit of programming on an output device at the receiver station;</u>  <u>receiving a plurality of control signals;</u>  <u>generating a local display based on at least the information signal of the stored datum of interest;</u>  <u>outputting the local display to the output device to present the local output comprising a portion of the outputted unit of television programming and the outputted local display, at least one of said steps of generating and outputting the local display being performed in response to at least one of said received plurality of control signals.</u></p>	<p>at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 90	U.S. Pat. No. 4,694,490, Claim 1
<p>90. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:</p> <p><u>receiving data in at least one information channel;</u>  <u>selecting at least a portion of said received data that is of interest to the user;</u>  <u>storing said selected at least said portion of said data;</u>  <u>receiving television programming and a control signal in said at least one information channel;</u>  <u>detecting the control signal in the at least one information channel;</u>  <u>generating a local graphic by processing said stored selected at least said portion of said data;</u>  <u>outputting to a monitor the generated local graphic based on said step of detecting to present a visual display on the monitor comprising the local graphic.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display</p>

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	specific to a specific user.
Application Claim 94	U.S. Pat. No. 4,694,490, Claim 1
<p>94. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:</p> <p><u>storing identification information identifying data of interest to the user;</u>  <u>receiving data over an information channel;</u>  <u>comparing the received data to the stored identification information;</u>  <u>selecting, based on said step of comparing, the data of interest to the user from the received data;</u>  <u>storing said selected data;</u>  <u>receiving an information transmission comprising television programming and a control signal;</u>  <u>detecting the control signal in the information transmission;</u>  <u>generating a local graphic based on said stored selected data;</u>  <u>outputting to a monitor the generated local graphic based on said step of detecting to present a visual display on the monitor including the local graphic.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
Application Claim 95	U.S. Pat. No. 4,694,490, Claim 1
<p>95. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:</p> <p><u>receiving one of a television broadcast and a television cablecast transmission, said transmission comprising television programming, data, and a control signal;</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver</p>

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<u>detecting the data in the transmission;</u> <u>selecting at least a portion of said detected data that is of interest to the user;</u> <u>storing said selected data;</u> <u>detecting the control signal in the transmission;</u> <u>generating a local graphic based on said stored selected data;</u> <u>outputting to a monitor the generated local graphic based on said step of detecting to present a visual display on the monitor including the local graphic.</u>	stations at a time when the corresponding overlay is not being displayed, receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations, detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 96	U.S. Pat. No. 4,694,490, Claim 1
<p>96. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:</p> <p><u>storing identification information identifying data of interest to the user;</u>  <u>receiving a plurality of information channels;</u>  <u>scanning each of said channels;</u>  <u>identifying one of said plurality of information channels containing the data of interest to the user;</u>  <u>tuning to the identified channel;</u>  <u>detecting the data of interest received on the identified channel;</u>  <u>storing said detected data of interest;</u>  <u>receiving at least one information transmission containing television programming and a control signal;</u>  <u>detecting the control signal in the information transmission;</u>  <u>generating a local graphic based on said stored selected data;</u>  <u>outputting to a monitor the generated local graphic based on said step of detecting to present a visual display on the monitor including the local graphic.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

*Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims*

Application Claim 97	U.S. Pat. No. 4,694,490, Claim 1
<p>97. A method at a receiver station of coordinating the processing of data to present a local output, said method comprising the steps of:</p> <p><u>storing identification information identifying data of interest to the user;</u>  <u>receiving a plurality of information channels, at least one of said channels containing data;</u>  <u>scanning each of said plurality of information channels;</u>  <u>comparing the identification information to the data on each said scanned channel;</u>  <u>identifying the channel containing the data of interest based on said step of comparing;</u>  <u>tuning to the identified channel;</u>  <u>detecting the data of interest received on the identified channel;</u>  <u>storing said detected data of interest;</u>  <u>receiving at least one information transmission containing television programming and a control signal;</u>  <u>detecting the control signal in the at least one information transmission;</u>  <u>generating a local sgraphic based on said stored selected data;</u>  <u>outputting to a display device at the receiver station the generated local graphic based on said step of detecting.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 98	U.S. Pat. No. 4,694,490, Claim 1
<p>98. A method at a receiver station of coordinating the processing of data and television programming to present a local output, said method comprising the steps of:</p> <p><u>selecting a datum of interest, said step of selecting comprising:</u>  <u>(a) storing an identification signal at the receiver station</u>  <u>identifying the datum of interest;</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not</p>

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<p><u>(b) querying a remote data source;</u>  <u>(c) receiving, in response to said step of querying, a plurality of data including the datum of interest from the remote data source, each of said plurality of data comprising an identification signal and an information signal;</u>  <u>(d) selecting the datum of interest from the plurality of received data;</u>  <u>storing the selected datum of interest;</u>  <u>receiving a plurality of units of television programming at the receiver station;</u>  <u>selecting one of the received plurality of units of television programming;</u>  <u>outputting the selected unit of television programming on an output device at the receiver station;</u>  <u>receiving a plurality of control signals;</u>  <u>generating a local display based on at least the information signal of the stored datum of interest;</u>  <u>outputting the local display to the output device to present the local output comprising the outputted unit of television programming and the outputted local display, at least one of said steps of generating and outputting the user specific display being performed in response to at least one of said received plurality of control signals.</u></p>	<p>being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 99	U.S. Pat. No. 4,694,490, Claim 1
<p>99. A method of providing data of interest to a receiver station from a remote data source, said data of interest for use at the receiver station in one of generating and outputting at least one receiver specific datum, said method comprising the steps of:</p> <p><u>storing data at said remote data source;</u>  <u>receiving at said remote data source a query from said receiver station;</u>  <u>transmitting said data from said remote data source to said receiver station in response to said step of receiving said query, said receiver station selecting and storing at least a portion of said transmitted data;</u>  <u>transmitting from a second remote source to said receiver station a signal which controls said receiver station to select and process an instruct signal which is effective at said receiver station to coordinate data processing with at least one of communication and presentation of television programming.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the</p>

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	selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
<p align="center"><b>Application Claim 100</b></p> <p>100. A method of communicating subscriber station information from a subscriber station to at least one remote data collection station, said method comprising the steps of:  <u>inputting a subscriber reaction at said subscriber station;</u>  <u>receiving at said subscriber station information that designates at least one of an instruct signal to process and an output to deliver in consequence of subscriber input;</u>  <u>determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;</u>  <u>processing an instruct signal which is effective to coordinate data processing with at least one of communication and presentation of television programming at said subscriber station in consequence of said step of determining; and</u>  <u>transferring from said subscriber station to at least one remote data collection station at least one datum at least one of confirming delivery of said instruct signal from said step of processing and confirming delivery of said effect from said step of processing.</u></p>	<p align="center"><b>U.S. Pat. No. 4,965,825, Claim 14</b></p> <p>14. A method of processing signals including:</p> <p>(a) the step of receiving a carrier transmission;  (b) the step of demodulating said carrier transmission to detect an information transmission thereon;  (c) the step of detecting and identifying embedded signals on said information transmission;  (d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals;  (e) the step of controlling said devices based on the instructions within said embedded signals; and  (f) the step of recording the receipt of and passing to said devices of said embedded signals.</p>
<p align="center"><b>Application Claim 104</b></p> <p>104. A method of controlling a remote intermediate television transmitter station to communicate television programming material to at least one receiver station, said remote intermediate television transmitter station including one of a broadcast and a cablecast transmitter, a plurality of selective transfer devices each operatively connected to said one of a broadcast and a cablecast transmitter, a receiver for receiving television programming from at least one origination transmitter station, a control signal detector, and one of a controller and a computer capable of controlling at least one of said plurality of selective transfer devices, and with said remote television transmitter station adapted to detect the presence of at least one control signal, and to deliver at said one of a broadcast and a cablecast transmitter said television programming, said method comprising the steps of:  <u>receiving said television programming at said at least one origination transmitter station and delivering said television programming to at least one origination transmitter, said television programming to have at least one associated instruct signal which is effective at the at least one receiver station to coordinate data processing with at least one of communication and presentation of said television programming;</u>  <u>receiving at least one control signal which at the remote</u></p>	<p align="center"><b>U.S. Pat. No. 4,694,490, Claim 1</b></p> <p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p>

*Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims*

<u>intermediate television transmitter station operates to control the communication of at least one of said television programming and said at least one instruct signal; and</u> <u>transmitting said at least one control signal from said at least one origination transmitter before a specific time.</u>	detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 108	U.S. Pat. No. 4,965,825, Claim 14
108. A method of controlling a receiver station including the steps of: <u>detecting one of the presence and absence of one of a broadcast and a cablecast control signal;</u> <u>inputting an instruct-to-react signal to a processor based on said step of detecting one of the presence and absence of a control signal;</u> <u>controlling said processor to output specific information in response to said step of inputting an instruct-to-react signal; and</u> <u>coordinating data processing with communication or presentation of television programming on the basis of information received from said processor based on said step of controlling a processor.</u>	14. A method of processing signals including:  (a) the step of receiving a carrier transmission; (b) the step of demodulating said carrier transmission to detect an information transmission thereon; (c) the step of detecting and identifying embedded signals on said information transmission; (d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals; (e) the step of controlling said devices based on the instructions within said embedded signals; and (f) the step of recording the receipt of and passing to said devices of said embedded signals.

Application Claim 112	U.S. Pat. No. 4,965,825, Claim 14
112. A method of controlling a receiver station, said receiver station having a processor for passing and executing instructions and a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of: <u>receiving one of a broadcast and a cablecast transmission;</u> <u>demodulating said one of a broadcast and a cablecast transmission to detect an information transmission thereon, said information transmission comprising an instruct signal which is effective to coordinate data processing with at least one of communication and presentation of television programming;</u> <u>detecting said instruct signal on said information transmission and passing said instruct signal to said processor;</u> <u>delaying, under processor control, the passing of said instruct signal to a controllable apparatus;</u> <u>passing said instruct signal to said controllable apparatus on the basis of said timing signal; and</u> <u>controlling said controllable apparatus based on said instruct signal.</u>	14. A method of processing signals including:  (a) the step of receiving a carrier transmission; (b) the step of demodulating said carrier transmission to detect an information transmission thereon; (c) the step of detecting and identifying embedded signals on said information transmission; (d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals; (e) the step of controlling said devices based on the instructions within said embedded signals; and (f) the step of recording the receipt of and passing to said devices of said embedded signals.

Application Claim 113	U.S. Pat. No. 4,704,725, Claim 1
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*Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims*

<p>113. A method of controlling at least one of a plurality of receiver stations each of which includes one of a broadcast and a cablecast mass medium programming receiver, at least one output device, a control signal detector, at least one processor capable of responding to an instruct signal, and with each said at least one of said plurality of receiver stations adapted to detect and respond to at least one instruct signal, said method comprising the steps of:</p> <p><u>receiving at one of a broadcast and a cablecast transmitter station an instruct signal which is effective at said at least one of said plurality of receiver stations to coordinate data processing with at least one of communication and presentation of television programming and delivering the instruct signal to a transmitter;</u>  <u>receiving at said transmitter station at least one control signal which at the receiver station operates to communicate the instruct signal to a specific processor;</u>  <u>and</u>  <u>transferring said at least one control signal to the transmitter, said transmitter transmitting the instruct signal and the at least one control signal.</u></p>	<p>1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,</p> <p>transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and</p> <p>causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>
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Application Claim 144	U.S. Pat. No. 4,694,490, Claim 1
<p>144. A method of coordinating a presentation at a plurality of output devices at a receiver station, said method comprising the steps of:</p> <p><u>tuning a first receiver to a first one of a broadcast transmission and a cablecast transmission;</u>  <u>receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes programming and a first control signal;</u>  <u>outputting the received programming on a first output device;</u>  <u>detecting the received first control signal;</u>  <u>tuning a second receiver, based on said detected first control signal, to receive a second one of a broadcast</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said</p>



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<u>transmission and a cablecast transmission, wherein at least a portion of said second one of a broadcast transmission and a cablecast transmission is related to the received programming;</u> <u>outputting the related at least a portion of said second one of a broadcast transmission and a cablecast transmission to a second output device wherein said receiver station outputs said first tuned one of a broadcast transmission and a cablecast transmission and said related at least a portion of said second one of a broadcast transmission and a cablecast transmission simultaneously.</u>	instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 145	U.S. Pat. No. 4,704,725, Claim 1
145. A method of coordinating a presentation at a plurality of output devices at a receiver station, said method comprising the steps of:  <u>tuning a television receiver to a first one of a broadcast transmission and a cablecast transmission;</u> <u>receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes television programming and a first control signal;</u> <u>outputting the received television programming on a first output device;</u> <u>detecting the received first control signal;</u> <u>tuning an information receiver, based on said detected first control signal, to receive a second one of a broadcast transmission and a cablecast transmission, wherein at least a portion of said second one of a broadcast transmission and a cablecast transmission is related to the received television programming;</u> <u>outputting the related at least a portion of said second one of a broadcast transmission and a cablecast transmission to a second output device wherein said receiver station outputs said first tuned one of a broadcast transmission and a cablecast transmission and said related at least a portion of said second one of a broadcast transmission and a cablecast transmission simultaneously.</u>	1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of: transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application, transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

Application Claim 146	U.S. Pat. No. 4,704,725, Claim 1
146. A method of coordinating a presentation at a plurality of output devices at a receiver station, said method comprising the steps of:	1. A method of communicating data to a multiplicity of receiver stations, each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user

<p><u>tuning a television receiver to a first one of a broadcast transmission and a cablecast transmissions;</u>  <u>receiving said first tuned one of a broadcast transmission and a cablecast transmission, wherein said one of a broadcast transmission and a cablecast transmission includes television programming and a first control signal;</u>  <u>outputting the received television programming on a first output device;</u>  <u>detecting the received first control signal;</u>  <u>tuning a radio receiver, based on said detected first control signal; to receive a second one of a broadcast transmission and a cablecast transmission, wherein said second one of a broadcast transmission and a cablecast transmission includes radio programming, said radio programming being related to said received television programming;</u>  <u>outputting the received radio programming to an output device.</u></p>	<p>specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:  transmitting an instruct-to-process signal to said computers to cause each of said computers to process data in accordance with its associated special user application,  transmitting an instruct-to-output signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,  detecting the presence of said instruct-to-output signal at selected receiver stations and coupling said instruct-to-output signal to the computers associated with said selected stations, and  causing said last named computers simultaneously to output their user specific signals to their associated output devices in response to said instruct-to-output signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>
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Application Claim 147	U.S. Pat. No. 4,694,490, Claim 1
<p>147. A method of communicating subscriber station information from a subscriber station to at least one remote data collection station, said method comprising the steps of:</p> <p>(1) <u>inputting a subscriber reaction at the subscriber station;</u>  (2) <u>receiving at said subscriber station information that designates at least one of at least one instruct signal to process and an output to deliver in consequence of a subscriber input;</u>  (3) <u>determining the presence of said subscriber input at said subscriber station by processing said subscriber reaction;</u>  (4) <u>processing at least one instruct signal which is effective to coordinate a media presentation at said subscriber station in consequence of said step of determining; and</u>  (5) <u>transferring from said subscriber station to said at least one remote data collection station at least one datum confirming delivery of at least one of:</u>  (a) <u>said at least one instruct signal from said step of</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and  causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the</p>

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processing; and (b) <u>said effect from said step of processing.</u>	selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 151	U.S. Pat. No. 4,694,490, Claim 1
<p>151. A method of controlling a remote television transmitter station to communicate television programming material to at least one receiver station, with said remote television transmitter station including one of a broadcast transmitter and a cablecast transmitter for transmitting television programming, a plurality of selective transfer devices each operatively connected to said one of said broadcast transmitter and said cablecast transmitter for communicating said television programming, a television receiver for receiving said television processor, wherein each of said at least one remote television transmitter station is adapted to detect the presence of at least one control signal, and to deliver at said one of said broadcast transmitter and said cablecast transmitter said television programming, said method comprising the steps of:</p> <p>(1) <u>receiving said television programming at said at least one origination transmitter station and delivering said television programming to at least one origination transmission transmitter, said television programming having an instruct signal which is effective at at least one of said remote television transmitter station and said at least one receiver station to coordinate a media presentation;</u></p> <p>(2) <u>receiving said at least one control signal which at the remote television transmitter station operates to control the communication of said television programming; and</u></p> <p>(3) <u>transmitting said at least one control signal from said at least one origination transmitter station before a specific time.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 155	U.S. Pat. No. 4,694,490, Claim 1
<p>155. A method controlling at least one remote transmitter station to deliver a receiver specific output at a receiver station and controlling said receiver station to communicate at least one receiver specific datum to a remote data collection station, wherein said receiver station is remote from said at least one remote transmitter station and said remote data collection station is remote from said receiver station, said method comprising the steps of:</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to</p>

<p>(1) <u>receiving at said at least one remote transmitter station at least one instruct signal which operates to coordinate a media presentation and operates at said receiver station to assemble and communicate said at least one receiver specific datum to said remote data collection station;</u></p> <p>(2) <u>receiving a control signal which operates at said at least one remote transmitter station to control the communication of said at least one instruct signal and communicating said control signal to said at least one remote transmitter station;</u></p> <p>(3) <u>receiving at least one of a code and an indication designating said at least one instruct signal to be transmitted by said at least one remote transmitter station, wherein said at least one of said code and said indication to serve at said receiver station as a source from which to select said at least one receiver specific datum; and</u></p> <p>(4) <u>transmitting at least one information transmission including said at least one instruct signal and said at least one of said code and said indicator from said at least one remote transmitter station.</u></p>	<p>modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 158	U.S. Pat. No. 4,694,490, Claim 1
<p>158. A method of controlling at least one receiver station said at least one receiver station including a mass medium programming receiver, a signal detector, at least one of at least one computer and at least one processor, wherein said at least one receiver station is adapted to detect the presence of at least one control signal and to input a subscriber reaction to a specific offer communicated in mass medium programming, said method comprising the steps of:</p> <p><u>receiving an instruct signal at a transmitter station and delivering said instruct signal to a transmitter, said instruct signal being effective at said at least one receiver station to coordinate a media presentation;</u></p> <p><u>receiving at least one of a code and a datum at said transmitter station, wherein said at least one of a code and a datum designates at least one of said instruct signal and said subscriber reaction;</u></p> <p><u>receiving at least one control signal at said transmitter station, wherein said at least one control signal at said at least one receiver station operates to at least one of decrypt and enable at least a portion of said instruct signal;</u></p> <p><u>transferring at least one of said at least one of a code and a datum and said at least one control signal to said</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated</p>

*Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims*

<u>transmitter at said transmitter station; and transmitting said instruct signal and said at least one of said at least one of a code and a datum and said at least one control signal from said transmitter station.</u>	television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 163	U.S. Pat. No. 4,694,490, Claim 1
<p>163. A method of controlling a receiver station including the steps of:</p> <p><u>detecting one of a presence and an absence of one of a broadcast control signal and a cablecast control signal; inputting an instruct-to-react signal to a processor based on said step of detecting;</u>  <u>controlling said processor to output specific information in response to said instruct-to-react signal; and</u>  <u>coordinating a media presentation on the basis of said specific information received from said processor based on said step of controlling said processor.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 167	U.S. Pat. No. 4,694,490, Claim 1
<p>167. A method of controlling a receiver station, wherein said receiver station has a processor for passing and executing instructions and a clock operatively connected to said processor for inputting a timing signal, said method comprising the steps of:</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated</p>

<p><u>receiving one of a broadcast transmission and a cablecast transmission;</u>  <u>demodulating said one of said broadcast transmission and said cablecast transmission to detect an information transmission thereon, said information transmission including an instruct signal which is effective to coordinate media presentation;</u>  <u>detecting said instruct signal on said information transmission and passing said instruct signal to said processor;</u>  <u>delaying, under processor control, the passing of said instruct signal to a controllable apparatus;</u>  <u>passing said instruct signal to said controllable apparatus on the basis of the timing signal; and</u>  <u>coordinating said media presentation based on said instruct signal.</u></p>	<p>receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and  causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 168	U.S. Pat. No. 4,694,490, Claim 1
<p>168. A method of communicating data and update material to at least one mass medium programming receiver station, each of said at least one mass medium programming receiver station including at least one of a broadcast receiver and a cablecast receiver, a data storage device, a control signal detector, and a computer, wherein each of said at least one mass medium programming receiver station is adapted to detect and respond to at least one instruct signal and to store data for subsequent processing, said method comprising the steps of:</p> <p>(1) <u>receiving data to be transmitted and delivering the data to a transmitter;</u>  (2) <u>receiving the at least one instruct signal which at the at least one mass medium programming receiver station is effective to coordinate a media presentation based on the data;</u>  (3) <u>transferring said at least one instruct signal to the transmitter; and</u>  (4) <u>transmitting at least one information transmission including said data and said at least one instruct signal.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and  causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-</p>

***Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims***

	overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 172	U.S. Pat. No. 4,694,490, Claim 1
<p>172. A method of delivering user specific programming at a receiver station, said receiver station including a receiver, a detector, a computer, and at least one first output device, said method comprising the steps of:</p> <p><u>receiving first data and video programming, said video programming to be outputted for a duration of time, wherein only a portion of said duration contains at least a first time interval of specific relevance, and wherein at least one of said first data and said video programming is received from at least one remote transmitter station; selecting and delivering said video programming to said at least one first output device for output to a user; detecting said first data before a time period during which user specific information will be processed and delivering said first data to said computer; generating second data to serve as a basis for delivering said user specific programming by processing at least a first of said first data in said time period; communicating at least one of (i) at least a second of said first data and (ii) at least a first of said second data to said at least one first output device in said at least said first time interval of specific relevance based on said step of generating; and outputting said user specific programming, said user specific programming including said video programming and said at least one of said first data and said second data.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 199	U.S. Pat. No. 4,694,490, Claim 1
<p>199. A method of delivering user specific programming at least one receiver station, each of said at least one receiver station including a receiver, at least one output device, a detector, and at least one processor operatively connected to said at least one output device, wherein each of said at least one receiver station is adapted to detect first data and generate second data, said second data to serve as a basis for communicating user specific information, said method comprising the steps of:</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated</p>

receiving at least one of video programming and said first data at at least a first transmitter station, said video programming to be displayed at said at least one output device for at least a duration of time, wherein only a portion of said duration of time is to include at least one time interval of specific relevance, and wherein said first data are to be processed at said at least one receiver station to generate said second data; commencing to transfer said at least one of said video programming and said first data to at least a first transmitter at a first specific time; and transmitting from said at least one transmitter station at least one information transmission including said at least one of said video programming and said first data.

receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  
transmitting a video signal containing a television program signal to said receivers,  
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  
detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

**Application Claim 215**

215. A method of delivering user specific programming at least one receiver station, each of said at least one receiver station including a receiver, at least one output device, a detector, and at least one processor operatively connected to said at least one output device, wherein each of said at least one receiver station is adapted to detect first data and generate second data, said second data to serve as a basis for communicating user specific information, said method comprising the steps of:

receiving at least one of video programming and said first data at at least a first transmitter station, said video programming to be outputted at said at least one output device for at least a duration of time, wherein only a portion of said duration of time to include at least one time interval of specific relevance, and wherein said first data are to be processed at said at least one receiver station to generate said second data; receiving at least a first control signal which operates at said at least said first transmitter station to communicate said at least one of said video programming and said first data to at least a first transmitter; and transmitting from said at least one transmitter station at least one information transmission including said at least one of said video programming and said first data.

**U.S. Pat. No. 4,694,490, Claim 1**

1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:  
transmitting a video signal containing a television program signal to said receivers,  
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  
detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-



	overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 235	U.S. Pat. No. 4,694,490, Claim 1
<p>235. A method of delivering customized programming at a receiver station, said receiver station including a receiver, a detector, a computer, and at least one output device, said method comprising the steps of:</p> <p><u>receiving first data and video programming, said video programming to be outputted for a duration of time, wherein only a portion of said duration contains at least one time interval of specific relevance, and at least one of said first data and said video programming is received from at least one remote transmitter station;</u>  <u>selecting and delivering said video programming to said at least one output device for output to a user;</u>  <u>storing said first data before a time period during which user information will be processed;</u>  <u>generating second data to serve as a basis for delivering said customized programming by processing at least one of said first data in said time period;</u>  <u>communicating said second data to said at least one output device in said at least one time interval of specific relevance based on said step of generating second data;</u>  <u>and</u>  <u>outputting said customized programming, said customized programming including said video programming and said second data.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,  transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,  receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,  detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

**APPENDIX C**

**CORRELATION CHARTS  
BETWEEN  
THE PARENT 1981 SPECIFICATION  
(as referenced to column and line numbers of U.S. Pat. No. 4,694,490)  
AND  
THE INSTANT 1987 PRIORITY SPECIFICATION**

# Specification Correlation Chart

## I. COLUMN 1

Column 1 lines 1-22.	<p><b>SIGNAL PROCESSING APPARATUS AND METHODS</b></p> <p><b>BACKGROUND OF THE INVENTION</b></p> <p>At the present time, vast amounts of programming are transmitted through various media throughout the United States which programming is handled with significant degrees of manual processing as different, discrete units of programming transmitted on single channel systems. Broadcasters and cablecasters transmit programming with the expectation that viewers in one place tune to only one channel at a time.</p> <p>On occasion and on a limited scale, the co-ordination of two media and two channels has occurred. Such co-ordination has taken the form of stereo simulcasts where one local television station broadcasts a program, generally of classical music, and simultaneously, a local radio station broadcasts the same music in stereo. But such simulcasts require significant degrees of manual processing at both the points of origination and reception.</p>	Page 7 lines 7-12.	[The prior art] has no capacity for coordinating the programming content transmitted by any given peripheral system with any other programming transmitted to a television receiver. It has no capacity for controlling two separate systems such as, for example, an automatic radio and television stereo simulcast.
Column 1 lines 23-28.	<p>Today great potential exists for a significant increase in the scope and scale of multimedia and multichannel presentations. This increase is desirable because it will increase variety and add substantially to the richness of presentations as regards both entertainment and the communications of ideas and information.</p>	Page 2 lines 20-23.	Unlocking this potential is desirable because these new media will add substantial richness and variety to the communication of ideas, information and entertainment.
Column 1 lines 29-35.	<p>This potential arises out of two simultaneous, independent trends. One is the development and growth of the so-called cable television industry whose member companies deliver locally not one but many channels of programming. The other is the widespread and growing ownership of computers, especially microcomputers in homes.</p>	Page 2 lines 8-11.	Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information.
Column 1 lines 36-41.	<p>It is the object of this invention to unlock this potential by the development of means and methods which permit programming to communicate with equipment that is external to television and radio receivers, particularly computers and computer peripherals such as printers.</p>	<p>Page 3 lines 30-33,</p> <p>Page 2 line 25 to page 3 line 8.</p>	<p>It is the object of this invention to unlock this great potential in the fullest measure by means of an integrated system of programming communication that joins together all these capacities most efficiently.</p> <p>To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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# **Specification Correlation Chart**

			<p>broadcast print, etc.</p> <p>But it requires much more.</p> <p>To unlock this potential fully requires a system with efficient capacity for satisfying the demands of subscribers who have little receiver apparatus and simple information demands as well as subscribers who have extensive apparatus and complex demands. It requires capacity for transmitting and organizing vastly more information and programming than any one-channel transmission system can possibly convey at one time. It requires capacity for controlling intermediate transmission stations that receive information and programming from many sources and for organizing the information and programming and retransmitting the information and programming so as to make the use of the information and programming at ultimate receiver stations as efficient as possible.</p>
Column 1 lines 42-44	It is the further purpose of this invention to provide means and methods to process and monitor such transmissions and presentations at individual receiver sites...	Page 3 lines 9-29.	<p>To unlock this potential also requires efficient capacity for providing reliable audit information to (1) advertisers and others who pay for the transmission and performance of programming and (2) copyright holders, pay service operators, and others such as talent who demand, instead, to be paid. This requires capacity for identifying and recording (1) what television, radio, data, and other programming and what instruction signals are transmitted at each transmission station and (2) what is received at each receiver station as well as (3) what received programming is combined or otherwise used at each receiver station and (4) how it is received, combined, and/or otherwise used.</p> <p>Moreover, this system must have the capacity to ensure that programming supplied for pay or for other conditional use is used only in accordance with those conditions. For example, subscriber station apparatus must display the commercials that are transmitted in transmissions that advertisers pay for. The system must have capacity for decrypting, in many varying ways, programming and instruction signals that are encrypted and for identifying those who pirate programming and inhibiting piracy.</p>
Column 1 lines 45-49.	...and to control, in certain ways, the use of transmitted programming and the operation of certain associated equipment. Such receiver sites may be stations or systems that intend to retransmit the programming, or they may be end users of the programming.	Page 11 lines 23-27.	<p>It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations.</p>

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Column 1 lines 49-53.	The present invention contemplates that certain data may be encrypted and that certain data collected from such processing and monitoring will automatically be transferred to a remote geographic location or locations.	Page 13 lines 5-9.	In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.
Column 1 lines 54-57.	In the prior art, there have been attempts to develop systems to control programming and systems to monitor programming, but the two have been treated as separate systems, and each has had limited capacity.	Page 2 lines 25-30.	To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.
Column 1 line 58 to column 2 line 27.	As regards control systems, cueing systems and equipment now exist that transmit instructions to operating equipment at receiver sites by means of tone signals that are carried, in television transmissions, in the audio portion and may be heard by the human ear. Such systems and devices are used to turn on equipment such as videotape players and recorders that have been manually loaded and to tell such equipment how long to run. Such systems operate by transmitting operating signals that precede and follow programming and are called "headers" and "trailers" respectively. The use of headers and trailers limits prior art in that headers and trailers can become separated from programming, thereby hampering automatic operations. Such prior art techniques have lacked the capacity to process the programming in various ways including to instruct receiver end equipment what specific programming to select to play or record other than that immediately at hand, how to load it on player or recorder equipment, when and how to play it or record it other than immediately, how to modify it, what equipment or channel or channels to transmit it on, when to transmit it, and how and where to file it or refile it or dispose of it. (Within television studios that are original transmitters of programming, certain systems and equipment do exist for certain automatic co-ordination of players, loaders, and other equipment; however, manual instructions still must be given, on site, for the co-ordination of such equipment which instructions are transmitted electronically on hard-wire channels that are strictly separate from the channels on which the programming is transmitted and such instructions are never broadcast.) Such prior art systems and equipment have lacked the capacity to automatically coordinate multi-channel and multi-media presentations. They have lacked the capacity to decrypt encrypted	Generally, page 4 line 17 to page 7 line 22.	This prior art is limited. It only transmits data; it does not control data processing. No system is preprogrammed to simultaneously control a plurality of central processor units, operating systems, and pluralities of computer peripheral units. None has capacity to cause simultaneous generation of user specific information at a plurality of receiver stations. None has any capacity to cause subscriber station computers to process received data, let alone in ways that are not inputted by the subscribers. None has any capacity to explain automatically why any given information might be of particular interest to any subscriber or why any subscriber might wish to select information that is not selected or how any subscriber might wish to change the way selected information is processed.  ... This prior art, too, is limited. It has no capacity to overlay any information other than information transmitted to all receiver stations simultaneously. It has no capacity to overlay any such information except in the order in which it is received. It has no capacity to cause receiver station computers to generate any information whatsoever, let alone user specific information. It has no capacity to cause overlays to commence or cease appearing at receiver stations, let alone commence and cease appearing periodically. As regards the automation of intermediate transmission stations, various so-called "cueing" systems in the prior art operate in conjunction with network broadcast transmissions to automate the so-called "cut-in" at local television and radio stations of locally originated programming such as so-called "local spot" advertisements. ... This prior art, too, is limited. It has no capacity to schedule

**Specification Correlation Chart**

<p>processing signals. They have lacked the capacity to monitor whether receiver-end equipment are following instructions properly.</p>	<p>automatically or transmit any programming other than that loaded immediately at the play heads of the controlled video players. It has no capacity to load the video players or identify what programming is loaded on the players or verify that scheduled programs are played correctly. It has no capacity to cause the video players to record programming from any source. It has no capacity to receive programming transmissions or process received transmissions in any way. It has no capacity to operate under the control of instructions transmitted by broadcasters. It has no capacity to insert signals that convey information to or control, in any way, the automatic operation of ultimate receiver station apparatus other than television receivers.</p> <p>...</p> <p>This prior art, too, is limited. It has no capacity for interconnecting or operating a system at any time other than the time when the order to do so is entered manually at the system or remote keyboard. It has no capacity for acting on instructions transmitted by broadcasters to interconnect, actuate or tune systems peripheral to a television receiver or to actuate a television receiver or automatically change channels received by a receiver. It has no capacity for coordinating the programming content transmitted by any given peripheral system with any other programming transmitted to a television receiver. It has no capacity for controlling two separate systems such as, for example, an automatic radio and television stereo simulcast. It has no capacity for selectively connecting radio receivers to radio peripherals such as computers or printers or speakers or for connecting computers to computer peripherals (except perhaps a television set). It has no capacity for controlling the operation of decryptors or selectively inputting transmissions to decryptors or outputting transmissions from decryptors to other apparatus. It has no capacity for monitoring and maintaining records regarding what programming is selected or played on any apparatus or what apparatus is connected or how connected apparatus operate.</p>	<p>...</p> <p>This prior art, too, is limited. It has no capacity for interconnecting or operating a system at any time other than the time when the order to do so is entered manually at the system or remote keyboard. It has no capacity for acting on instructions transmitted by broadcasters to interconnect, actuate or tune systems peripheral to a television receiver or to actuate a television receiver or automatically change channels received by a receiver. It has no capacity for coordinating the programming content transmitted by any given peripheral system with any other programming transmitted to a television receiver. It has no capacity for controlling two separate systems such as, for example, an automatic radio and television stereo simulcast. It has no capacity for selectively connecting radio receivers to radio peripherals such as computers or printers or speakers or for connecting computers to computer peripherals (except perhaps a television set). It has no capacity for controlling the operation of decryptors or selectively inputting transmissions to decryptors or outputting transmissions from decryptors to other apparatus. It has no capacity for monitoring and maintaining records regarding what programming is selected or played on any apparatus or what apparatus is connected or how connected apparatus operate.</p>
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**II. COLUMN 2**

<p>Column 2 lines 28-62.</p>	<p>As regards monitoring systems, various systems and devices have been developed to determine what programming</p>	<p>Generally page 7 line 23 to page 9 line 5.</p>	<p>The prior art includes a variety of systems for monitoring programming and generating so-called "ratings." One system</p>
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1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language	Specification Correlation Chart
	<p>is played on television. One such system for monitoring programs is described in U.S. Patent to Haselwood, et al. No. 4,025,851. Another that monitors by means of audio codes that are only "substantially inaudible" is described in U.S. Patent to Crosby No. 3,845,391. Recently devices, called addressable converters, have been developed that facilitate so-called pay-per-view marketing of programming by monitoring what individual television receivers tune to and either permitting or preventing the tuners to tune to given frequencies satisfactorily. Such prior art techniques and equipment have been limited to monitoring single broadcast stations, channels or units and have lacked the ability to monitor multimedia presentations. They have been able to monitor only the audio or the video portion of television transmissions. They have been able either to monitor what is transmitted over one channel or what is received by one or more receivers but not both. They have lacked the capacity to record and transfer information simultaneously. They have been unable to decrypt encrypted signals. They have been able to monitor only single signal word types or word lengths that are placed, within the transmissions, in locations that are unvarying and unvariable. They have lacked the capacity to compare, assemble, and/or evaluate multi-word, multi-location signals. Except in the possible case of addressable converters, they have been unable to distinguish the absence of signals or signal words in transmissions. They have lacked the capacity to communicate processing instructions to external equipment as described in the paragraph above. It is the object of the present invention to overcome these and other deficiencies of the prior art.</p>		<p>that monitors by means of embedded digital signals is described in U.S. Patent to Haselwood, et al. No. 4,025,851. Another that monitors by means of audio codes that are only "substantially inaudible" is described in U.S. Patent to Crosby No. 3,845,391. A third that automatically monitors a plurality of channels by switching sequentially among them and that includes capacity to monitor audio and visual quality is described in U.S. Patent to Greenberg No. 4,547,804.</p> <p>This prior art, too, is limited. It has capacity to monitor only single broadcast stations, channels or units and lacks capacity to monitor more than one channel at a time or to monitor the combining of media. At any given monitor station, it has had capacity to monitor either what is transmitted over one or more channels or what is received on one or more receivers but not both. It has assumed monitored signals of particular format in particular transmission locations and has lacked capacity to vary formats or locations or to distinguish and act on the absence of signals or to interpret and process in any fashion signals that appear in monitored locations that are not monitored signals. It has lacked capacity to identify encrypted signals then decrypt them. It has lacked capacity to record and also transfer information to a remote geographic location simultaneously.</p> <p>As regards recorder/player systems, many means and methods exist in the prior art for recording television or audio programming and/or data on magnetic, optical or other recording media and for retransmitting prerecorded programming. Video tape recorders have capacity for automatic delayed recording of television transmissions on the basis of instructions input manually by viewers. So-called "interactive video" systems have capacity for locating prerecorded television programming on a given disc and transmitting it to television receivers and locating prerecorded digital data on the same disc and transmitting them to computers.</p> <p>This prior art, too, is limited. It has no capacity for automatically embedding signals in and/or removing embedded signals from a television transmission then recording the transmission. It has no capacity for controlling the connection or actuation or tuning of external apparatus. It has no capacity for retransmitting prerecorded</p>	

**Specification Correlation Chart**

			programming and controlling the decryption of said programming, let alone doing so on the basis of signals that are embedded in said programming that contain keys for the decryption of said programming. It has no capacity for operating on the basis of control signals transmitted to recorder/players at a plurality of subscriber stations, let alone operating on the basis of such signals to record user specific information at each subscriber station.
Column 2 lines 63-64.	(The term "signal unit" hereinafter means one complete instruction or information message unit.	Page 14 lines 26-27.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit.
Column 2 lines 65-66.	Examples of signal units are a unique code identifying a programming unit,...	Page 14 lines 27-29.	Examples of signal units are a unique code identifying a programming unit, ....
Column 2 lines 66-67.	...or a unique purchase order number identifying the proper use of a programming unit,...	Page 14 lines 27-30.	Examples of signal units are... a unique purchase order number identifying the proper use of a programming unit, or ....
Column 2 line 67 to column 3 line 3.	...or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.	Page 14 lines 27-32.	Examples of signal units are... a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.

**III. COLUMN 3**

Column 3 lines 3-5.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission.	Page 14 lines 32-35.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission.
Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
Column 3 lines 8-12.	Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)	Page 15 lines 2-6.	Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)
Column 3 lines 13-27.	It is a further object of the present invention to process and monitor signals on numerous channels by sequentially scanning each channel in a predetermined manner which manner may be varied. It is also an object of the present invention to prevent unauthorized use of signals and programming by permitting signal encryption, the variation of word numbers, word lengths, word compositions, and/or word locations. It is also an object of this system to process different signal words in different ways. It is also an object of	Page 3 lines 21-21\9.	Moreover, this system must have the capacity to ensure that programming supplied for pay or for other conditional use is used only in accordance with those conditions. For example, subscriber station apparatus must display the commercials that are transmitted in transmissions that advertisers pay for. The system must have capacity for decrypting, in many varying ways, programming and instruction signals that are encrypted and for identifying those who pirate programming and inhibiting piracy.



1987 Specification	1987 Language	1987 Specification	1987 Language
<b>Specification Correlation Chart</b>			

	the present invention to provide a record of signals that may be transferred to a geographically distant location on command or predetermined instruction. Other objects of this invention will appear from the following descriptions and the appended claims.		
Column 3 line 29.	<b>SUMMARY OF THE INVENTION</b>	See generally page 11 line 4 to page 14 line 30.	<b>SUMMARY OF THE INVENTION</b>
Column 3 lines 30-31.	The present invention consists of methods and apparatus with several forms.	Page 16 lines 15-27.	A central objective of the present invention is to provide flexibility in regard to installed station apparatus. At any given time, the system must have capacity for wide variation in individual station apparatus in order to provide individual subscribers the widest range of information options at the least cost in terms of installed equipment. Flexibility must exist for expanding the capacity of installed systems by means of transmitted software and for altering installed systems in a modular fashion by adding or removing components. Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates ...
Column 3 lines 32-37.	One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of instruction and information signals embedded in programming either supplied from a remote source or sources or prerecorded.	Page 12 lines 18-24.	It is the further purpose of this invention to provide means and methods for the automation of intermediate transmission stations that receive and retransmit programming. The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, "broadcast") or over hard-wire (hereinafter, "cablecast").
Column 3 lines 37-39.	The programming may be delivered to the transmission facility by any means including broadcast, hard-wire, and manual means.	Page 11 lines 16-19.	... the present invention has capacity for transmitting data and control instructions in the same information stream to many different apparatus at a given subscriber station, for causing computers to generate and transmit programming, ...
Column 3 lines 39-41.	The transmission facility may transmit a single channel or multiple channels of programming.	Page 12 lines 21-24.	The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, "broadcast") or over hard-wire (hereinafter, "cablecast").
Column 3 lines 41-45.	The method includes a monitoring technique to construct a record for each transmitted channel that duplicates the log that the Federal Communications Commission requires broadcast station operators to maintain.	Page 12 lines 25.	They may transmit single channels or multiple channels.
		Page 12 lines 25-29.	The present invention includes capacity for automatically constructing records for each transmitted channel that duplicate the logs that the Federal Communications Commission requires broadcast station operators to maintain.

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 3 lines 45-47.	The method permits the transfer of such records to a predetermined site or sites in a predetermined fashion or fashions.	Page 337 lines 19-21	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.
Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 12 lines 30-35.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
Column 3 lines 51-56.	This method provides techniques whereby, automatically, single channel, single medium presentations, be they television, radio, or other electronic transmissions, may be recorded, co-ordinated in time with other programming previously transmitted and recorded, or processed in other fashions.	Page 12 lines 30-33.  Page 2 lines 8-19.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, especially the automation of combined medium and multi-channel presentations.  Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)  ... methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.
		Page 13 lines 10-13.	It is a further purpose of this invention to provide means and methods for recording combined media and/or multi-channel programming and for playing back prerecorded programming of such types.
Column 3 lines 56-60.	Multimedia presentations may be co-ordinated in time and/or in place as, for example, when real-time video programming is co-ordinated with presentations from a microcomputer working with data supplied earlier.	Page 12 lines 3-9.	It is the further purpose of this invention to provide means and methods whereby a simplex broadcast transmission can cause periodic combining of relevant user specific information and conventional broadcast programming simultaneously at a plurality of subscriber stations, thereby integrating the broadcast information with each user's own information.

**Specification Correlation Chart**

		Page 2 lines 8-19.	<p>Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)</p>
		Page 28 lines 2-3.	<p>This television based combined medium is but one example of many combined media.</p>
Column 3 lines 60-66.	This method provides techniques whereby the timing and fashion of the playing, processing, and co-ordination of a presentation or presentations may be determined at the time and place of transmission or of presentation, either in whole or in part, either locally or remotely, or a combination of these factors.	Page 11 lines 23-31.	<p>It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations. One advantage of the present invention is great ease of use. For example, as will be seen, a subscriber can cause his own information to be processed in highly complex ways by merely turning his television receiver on and tuning to a particular channel.</p>
		Page 450 lines 27-35.	<p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) ....</p>
Column 3 line 66 to column 4 line 2.	The method provides monitoring techniques to develop data on patterns of viewership and to permit the determination of specific usage at individual receiving sites for various purposes including, for example, the billing of individual customers.	Page 13 lines 1-9.	<p>It is the further purpose of this invention to provide means and methods for identifying and recording what television, radio, data, and other programming is transmitted at each transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.</p>

			Page 28 lines 29-35.	It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
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IV. COLUMN 4

Column 4 lines 2-4.	The method provides techniques whereby unauthorized use of programming and/or of signals may be prevented.		Page 13 lines 14-17.	It is a further purpose of this invention to provide a variety of means and methods for restricting the use of transmitted communications to only duly authorized subscribers.
Column 4 lines 5-6.	These techniques employ signals embedded in programs.		Page 13 lines 25-26.	The present invention employs signals embedded in programming.
Column 4 line 6.	The advantage of such embedded signals,...		Page 13 line 26.	Embedded signals provide several advantages.
Column 4 lines 6-9.	...as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing...		Page 13 lines 27-28.	They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
Column 4 lines 9-12.	...that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming,...		Page 13 lines 28-31.	They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions.
Column 4 lines 12-13.	...and that they can be monitored.		Page 13 lines 31-32.	They can be conveniently monitored.
Column 4 lines 13-14.	(The techniques described here may use headers and trailers from time to time.)		Page 344 line 33 to page 345 line 14.	Separating the transmission of the end of each program unit and the commencement of the succeeding unit is a brief interval of time. Before transmitting the first program unit and, subsequently, in each one of said intervals, said distribution station transmits a SPAM message that contains execution and meter-monitor segments. Each message contains the same execution segment information that is addressed to ITS computers, 73, and instructs each computer, 73, to identify the information in the meter-monitor segment of said message, to compare said "code" information to the preprogrammed schedule information of said computer, 73, and if a match results, to select and record the programming of the program unit that follows said message, or if no match results, to not select and not record said programming. Each message contains meter-monitor "program unit identification code" information of the program unit that immediately follows.

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 4 lines 14-17.	The embedded signals may run and repeat continuously throughout the programming or they may run only occasionally or only once.	Page 14 lines 3-5.	In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once.
Column 4 lines 17-18.	They may appear in various and varying locations.	Page 14 line 6.	They may appear in various and varying locations.
Column 4 lines 18-22.	In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 14 lines 6-11.	In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.
Column 4 lines 22-25.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.	Page 14 lines 11-14.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.
Column 4 lines 25-26.	In television audio, they are likely to lie between eight and fifteen kilohertz.	Page 14 lines 14-15.	In television audio, they are likely to lie between eight and fifteen kilohertz.
Column 4 lines 26-28.	Signals may also be transmitted on frequencies outside the ranges of television and radio.	Page 14 lines 15-17.	In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....
		Page 463 lines 10-29.	(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)
Column 4 lines 28-30.	Different and differing numbers of signals may be sent in different and differing word lengths and locations.	Page 533 lines 9-17.	In the preferred embodiment...SPAM messages are composed of varying numbers and sequences of segments of highest priority, intermediate priority, and lowest priority segment information. Complex SPAM receiver apparatus

**Specification Correlation Chart**

			have means and are preprogrammed to process at register memory execution segment information of varying lengths of binary information.
Column 4 lines 31-33.	The present invention provides a method for obscuring the meaning of the signals to prevent unauthorized use of the signals and of their associated programing. Their meanings may be obscured through encryption so that apparatus described below are necessary to decrypt them.	Page 13 lines 14-17.	It is a further purpose of this invention to provide a variety of means and methods for restricting the use of transmitted communications to only duly authorized subscribers. Such means and methods include techniques for encrypting programming and/or instructions and decrypting them at subscriber stations.
Column 4 lines 34-36.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 17-19.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
Column 4 lines 36-40.	Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.	Page 13 lines 19-24.	... [signals] will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. In television audio, they are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
Column 4 lines 40-46.		Page 14 lines 10-25.	SPAM messages are composed of elements—headers, execution segments, meter-monitor segments, and information segments—whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information
		Page 60 line 19 to page 61 line 1.	

**Specification Correlation Chart**

			has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.
Page 91 lines 18-20.			All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.
Page 293 lines 32-35.	The present invention also provides a method for identifying attempts to make unauthorized use of signals and the programming associated with signals.		At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion--not resulting in a match causes...
Page 293 lines 28-33.	When an apparatus finds that signal words fail to appear in places...		(Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CCI3 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM...
Page 300 lines 10-12.	...and at times when and where they are expected,...		In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information....
Page 301 lines 4-10.			(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with....
Page 294 lines 10-13.	...the apparatus may automatically contact one or more remote sites...		...causes said controller, 20, to cause the auto dialer, 24, and telephone connection, 22, to establish telephone communications with a particular predetermined remote station, in the fashion described above....
Page 301 lines 18-21.			...said portion causes controller, 20, to cause the auto dialer, 24, and telephone connection, 22, of said station to establish telephone communications with a particular predetermined

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 4 lines 53-54.	...and may or may not disable the flow of programing in one or more ways.	Page 294 lines 1-3,  lines 25-27.  Page 301 lines 11-14,  lines 28-30.	remote station, in the fashion described above,.... ...controller, 20, of said station to cause all information of said local-cable-enabling-message (#7) to be erased from all memory of said station.... ...causes said controller, 20, to erase all preprogrammable RAM and EPROM of the signal processing apparatus at said station, thereby disabling said apparatus.) ...resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program-enabling-message (#7) to be erased from all memory of said station.... ...the instructions of said portion cause said controller, 20, to erase all preprogrammable RAM and EPROM of the signal processing apparatus at said station,.... In the present invention, particular signal processing apparatus (hereinafter called the "signal processor") The apparatus include one or more devices that can selectively scan transmission frequencies as directed.... The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors.... ...transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;.... ...decryptors that may convert the received information, in part or in whole, to other digital information according to preset methods or patterns; .... ...and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream.
Column 4 lines 55-56.	The present invention contemplates signal processing apparatus....	Page 15 lines 7-8.	
Column 4 lines 56-57.	...comprising a device or devices that can selectively scan transmission channels as directed.	Page 15 lines 12-14.	
Column 4 lines 57-59.	The channels may convey television, radio, or other transmission frequencies.	Page 15 lines 16-17.	
Column 4 lines 59-60.	The input transmissions may be received by means of antennas or from hard-wire connections.	Page 15 lines 17-19.	
Column 4 lines 61-62.	The scanners/switches, working in parallel or series or combinations, transfer the transmissions...	Page 15 lines 19-21.	
Column 4 lines 62-65.	...to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;...	Page 15 lines 21-23.	
Column 4 lines 65-67.	...decryptors that may convert the received information, in part or in whole, to other digital information according to preset methods or patterns;...	Page 15 lines 23-26.	
Column 4 line 68 to column 5 line 2.	...and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream.	Page 15 lines 26-28.	

# V. COLUMN 5

Column 5 lines 2-4.	The processors and buffers can have inputs from each of the	Page 15 lines 28-30.	The processors and buffers can have inputs from each of the
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**Specification Correlation Chart**

	receiver/detector lines and evaluate information continuously.		receiver/detector lines and evaluate information continuously.
Column 5 lines 4-7.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.	Page 15 lines 30-32.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.
Column 5 lines 7-11.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.	Page 15 line 32 to page 16 line 1.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.
Column 5 lines 11-14.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer stored information as required.	Page 16 lines 1-3.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer stored information....
Column 5 lines 14-16.	The apparatus has a clock for determining and recording time as required.	Page 16 lines 4-6.	The apparatus has a clock for determining and recording time as required.
Column 5 lines 16-20.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 16 lines 6-10.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.
Column 5 lines 20-22.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.	Page 16 line 10-11.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.
Column 5 lines 23-27.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the basic apparatus described above may omit one or more of the specific operating elements described above.	Page 16 lines 12-15.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the signal processor described above may omit one or more of the specific operating elements described above.
Column 5 line 29.	<b>BRIEF DESCRIPTION OF THE DRAWINGS</b>	See generally page 16 line 33 to page 19 line 1.	<b>BRIEF DESCRIPTION OF THE DRAWINGS</b>
Column 5 lines 30-31.	Fig. 1 is a block diagram of one embodiment of signal processing apparatus.	Page 17 lines 9-10.	Fig. 2 is a block diagram of one embodiment of a signal processor.
Column 5 lines 32-33.	Fig. 2A is a block diagram of a TV signal decoder apparatus.	Page 17 lines 11-12.	Fig. 2A is a block diagram of a TV signal decoder apparatus.
Column 5 lines 34-35.	Fig. 2B is a block diagram of a radio signal decoder apparatus.	Page 17 lines 13-14.	Fig. 2B is a block diagram of a radio signal decoder apparatus.
Column 5 lines 36-37.	Fig. 2C is a block diagram of an other signal decoder apparatus.	Page 17 lines 15-16.	Fig. 2C is a block diagram of an other signal decoder apparatus.
Column 5 lines 38-41.	Figs. 3A 3B and 3C are a block diagram of signal processing apparatus and methods as they might be used in an intermediate transmission facility, in this case a cable system head end.	Page 18 lines 13-15.	Fig. 6 is a block diagram of one example of signal processing apparatus and methods at an intermediate transmission station, in this case a cable system headend.

# Specification Correlation Chart

Column 5 lines 42-57.	Fig. 4A is a block diagram of a signal processor and a programming decryptor or other interrupt means with signals input to the signal processor before programming decryption. Also included is a local input. Fig. 4B is a block diagram of a signal processor and a decryptor/interruptor with signals input to the signal processor in programming after programming decryption. Fig. 4C is a block diagram of a signal processor and a decryptor/interruptor with signals input both before and after programming decryption. Fig. 4D is a block diagram of a signal processor and a multiple decryptor/interrupters in series, with signals input both before and after programming decryption. Fig. 4E is a block diagram of a signal processor and multiple decryptor/interruptors and with signals from one channel needed for decryption of a second channel.	Page 18 lines 8-9.	Fig. 4 is a block diagram of one example of a signal processing programming reception and use regulating system.
Column 5 lines 58-60.	Fig. 5 is a block diagram of signal processor apparatus monitoring various programming and viewership patterns.	Page 18 lines 10-12.	Fig. 5 is a block diagram of one example of a signal processing apparatus and methods monitoring system installed to monitor a subscriber station.
Column 5 lines 61-64.	Fig. 6A is a block diagram of signal processor apparatus and methods used to instruct and inform external equipment governing the environment of the local receiver site.	Page 18 lines 18-20.	Fig. 7A is a block diagram of signal processing apparatus and methods with external equipment regulating the environment of the local receiver site.
Column 5 lines 65-68.	Fig. 6B is a block diagram of signal processor apparatus and methods used to co-ordinate a multi-media, multi-channel presentation and monitor such viewership.	Page 18 lines 21-23.	Fig. 7B is a block diagram of signal processing apparatus and methods used to control a combined medium, multi-channel presentation and to monitor such viewership.

## VI. COLUMN 6

Column 5 lines 2-4.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.	Page 15 lines 28-30.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.
Column 5 lines 4-7.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.	Page 15 lines 30-32.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.
Column 5 lines 7-11.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.	Page 15 line 32 to page 16 line 1.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.
Column 5 lines 11-14.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and	Page 16 lines 1-3.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer

	transfer stored information as required in a predetermined fashion or fashions.		stored information....
Column 5 lines 14-16.	The apparatus has a clock for determining and recording time as required.	Page 16 lines 4-6.	The apparatus has a clock for determining and recording time as required.
Column 5 lines 16-20.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 16 lines 6-10.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.
Column 5 lines 20-22.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.	Page 16 line 10-11.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.
Column 5 lines 23-27.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the basic apparatus described above may omit one or more of the specific operating elements described above.	Page 16 lines 12-15.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the signal processor described above may omit one or more of the specific operating elements described above.
Column 5 line 29.	<b>BRIEF DESCRIPTION OF THE DRAWINGS</b>	See generally page 16 line 33 to page 19 line 1.	<b>BRIEF DESCRIPTION OF THE DRAWINGS</b>
Column 5 lines 30-31.	Fig. 1 is a block diagram of one embodiment of signal processing apparatus.	Page 17 lines 9-10.	Fig. 2 is a block diagram of one embodiment of a signal processor.
Column 5 lines 32-33.	Fig. 2A is a block diagram of a TV signal decoder apparatus.	Page 17 lines 11-12.	Fig. 2A is a block diagram of a TV signal decoder apparatus.
Column 5 lines 34-35.	Fig. 2B is a block diagram of a radio signal decoder apparatus.	Page 17 lines 13-14.	Fig. 2B is a block diagram of a radio signal decoder apparatus.
Column 5 lines 36-37.	Fig. 2C is a block diagram of an other signal decoder apparatus.	Page 17 lines 15-16.	Fig. 2C is a block diagram of an other signal decoder apparatus.
Column 5 lines 38-41.	Figs. 3A 3B and 3C are a block diagram of signal processing apparatus and methods as they might be used in an intermediate transmission facility, in this case a cable system head end.	Page 18 lines 13-15.	Fig. 6 is a block diagram of one example of signal processing apparatus and methods at an intermediate transmission station, in this case a cable system headend.
Column 5 lines 42-57.	Fig. 4A is a block diagram of a signal processor and a programming decryptor or other interrupt means with signals input to the signal processor before programming decryption. Also included is a local input. Fig. 4B is a block diagram of a signal processor and a decryptor/interruptor with signals input to the signal processor in programming after programming decryption. Fig. 4C is a block diagram of a signal processor and a decryptor/interruptor with signals input both before and after programming decryption. Fig. 4D is a block diagram of a signal processor and a multiple decryptor/interrupters in series, with signals input	Page 18 lines 8-9.	Fig. 4 is a block diagram of one example of a signal processing programming reception and use regulating system.

**Specification Correlation Chart**

	both before and after programming decryption. Fig. 4E is a block diagram of a signal processor and multiple decryptor/interruptors and with signals from one channel needed for decryption of a second channel. Fig. 5 is a block diagram of signal processor apparatus monitoring various programming and viewership patterns.		
Column 5 lines 58-60.		Page 18 lines 10-12.	Fig. 5 is a block diagram of one example of a signal processing apparatus and methods monitoring system installed to monitor a subscriber station.
Column 5 lines 61-64.	Fig. 6A is a block diagram of signal processor apparatus and methods used to instruct and inform external equipment governing the environment of the local receiver site.	Page 18 lines 18-20.	Fig. 7A is a block diagram of signal processing apparatus and methods with external equipment regulating the environment of the local receiver site.
Column 5 lines 65-68.	Fig. 6B is a block diagram of signal processor apparatus and methods used to co-ordinate a multi-media, multi-channel presentation and monitor such viewership.	Page 18 lines 21-23.	Fig. 7B is a block diagram of signal processing apparatus and methods used to control a combined medium, multi-channel presentation and to monitor such viewership.

**VII. COLUMN 7**

Column 7 lines 1-5.	Detectors, 34, 37, and 38, line receiver, 33, and high pass filter, 36, all operate in predetermined fashions which fashions may be changed by external controller, 20 (referring to Fig. 1), to be described below.	Page 35 lines 31-35.	Line receiver, 33; high pass filter, 36; detectors, 34, 37, and 38; and controller, 39, all operate under control of controller, 39, and in preprogrammed fashions that may be changed by controller, 39.
Column 7 lines 6-11.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.	Page 29 line 33 to page 30 line 5.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements. Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
Column 7 lines 12-15.	One such other path is that from mixer 2. Mixer 2 and the controlled oscillator, 6, act to select a radio frequency of interest which is inputted to a radio signal decoder, 40,...	Page 29 lines 26-29.	Simultaneously, mixer, 2, and the controlled oscillator, 6, act to select a radio frequency of interest which is inputted to a radio signal decoder, 40.
Column 7 lines 15-18.	... shown in FIG. 2B. The frequency passes first through standard radio receiver circuitry, 41, well known in the art, a radio decoder, 42, and a standard digital detector, 43.	Page 36 lines 1-14.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency. Decoder, 40, in Fig. 2 is one such radio signal decoder. A selected frequency of interest is inputted at a fixed frequency to standard radio receiver circuitry, 41, which receives the radio information of said frequency using standard radio receiver techniques, well known in the art, and transfers said radio information to radio decoder, 42. Radio

1987 Spec. Reference	1987 Language	1987 Spec. Reference	1987 Language
<b>Specification Correlation Chart</b>			
			decoder, 42, decodes the signal information embedded in said radio information and transfers said decoded information to a standard digital detector, 43. Said detector, 43, detects the binary signal information in said decoded information and inputs said signal information to controller, 44, discussed more fully below.
Column 7 lines 18-20.	All operate in predetermined fashions that may be changed by external controller, 20 (referring to Fig. 1).	Page 36 lines 14-17.	Circuitry, 41; decoder, 42; and detector, 43, all operate under control of controller, 44, and in predetermined fashions that may be changed by controller, 44.
Column 7 lines 20-21.	As FIG. 1 shows, the radio signal detector outputs to buffer/comparator 8.	Page 33 lines 18-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements.
Column 7 lines 22-24.	(The signal processor apparatus described here is configured to receive broadcast TV transmissions and cablecast TV and radio transmissions.	Page 29 line 32 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
Column 7 lines 24-30.	Were it desirable to process signals in other transmissions such as broadcast microwave transmissions or cablecast transmissions on other than standard TV and radio frequencies, the mixers and switches would be appropriately reconfigured and one or more other signal decoders as described in FIG. 2C would be added.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
Column 7 lines 30-34.	As FIG. 2C shows, the desired frequencies would pass through appropriate other receiver circuitry, 45, well known in the art, and an appropriate digital detector, 46, before being outputted to buffer/comparator 8.	Page 33 lines 26-33.	... a signal processor can monitor any combination of inputs and transmission frequencies, and the signal processor of Fig. 2 is but one embodiment of a signal processor. Other embodiments can receive and monitor available programming in transmission frequencies other than radio and television frequencies through the addition of one or more other signal decoders such as that of Fig. 2C described below.
Column 7 lines 34-35.	These, too, can be controlled by controller, 20 (ref. to Fig. 1).	Page 36 lines 18-29.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency. A selected other frequency (such as a microwave frequency) is inputted to appropriate other receiver circuitry, 45, well known in the art. Said receiver circuitry, 45, receives the information of said frequency using standard receiver techniques, well known in the art, and transfers said information to an appropriate digital detector, 46. Said detector, 46, detects the binary signal information in said information and inputs said signal information to controller, 47, considered more fully below.
		Page 36 lines 29-31.	Circuitry, 45, and detector, 46, operate under control of

**Specification Correlation Chart**

			controller, 47, and in predetermined fashions that may be changed by controller, 47.
Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion...	Page 33 lines 18-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements.
		Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
		Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ....
Column 7 lines 37-39.	...that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 37 lines 22 to page 38 line 10.	Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.
		Page 156 line 33.	Fig. 3A shows one such preferred controller, 39.
		Page 157 lines 5-7.	Buffer, 39C, and processor, 39D, are the second buffer and

**Specification Correlation Chart**

				processor and perform protocol conversion functions.
		Page 14 lines 22-25.		In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
Column 7 lines 39-43.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10.	Page 30 lines 21-26.		In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decrypter, 10.
Column 7 lines 43-46.	Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required.	Page 30 lines 31-35.		Decrypter, 10, is a standard digital information decrypter, well known in the art, that ... uses conventional decrypter techniques, well known in the art, to decrypt said signals as required.
Column 7 lines 46-47.	Decrypter, 10, then passes the decrypted signals to processor or monitor, 12.	Page 30 line 35 to page 31 line 1.		Decrypter, 10, transfers decrypted signals to controller, 12.
Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.		Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.		Controller, 12, receives the signals inputted from buffer/comparator, 8, and decrypter, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.		If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
Column 7 lines 59-60.	If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.		If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.		Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.		Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor

1987 Language	1987 Spec Reference	1987 Language	1987 Spec Reference
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### Specification Correlation Chart

			records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
Column 7 line 67 to column 8 line 1.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and discarding duplicate signals.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....

### VIII. COLUMN 8

Column 8 lines 2-4.	Buffer/comparator, 14, is connected to clock, 18, and has means for adding information such as time of receipt, for example, to signals.	Page 32 lines 14-16.	Buffer/comparator, 14, receives time information from clock, 18, and has means for incorporating time information into signal records.
Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
Column 8 lines 7-12.	Buffer/ comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.
Column 8 lines 13-14.	Digital recorder, 16, may be a memory storage element of standard design.	Page 32 lines 34-35.	Digital recorder, 16, is a memory storage element of standard design. ....
Column 8 lines 14-16.	It has means for determining in a predetermined fashion how full it is and passing this information to controller, 20.	Page 33 lines 2-4.	In a predetermined fashion, recorder, 16, can determine how full it is and transmit this information to controller, 20.
Column 8 lines 16-19.	The predetermined fashion may include provisions whereby recorder, 16, informs controller, 20, automatically when it reaches a certain level of fullness.	Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
Column 8 lines 25-27.	The controller, 20, governs the operation of all operating	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of



**Specification Correlation Chart**

	elements of the apparatus.		all elements of the signal processor ...
Column 8 lines 27-29.	The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.	Page 248 line 35 to page 249 line 5.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
Column 8 lines 30-32.	This then allows the channels to be diverted to the detectors, receivers, and decoders in any predetermined pattern desired.	Page 248 line 35 to page 249 line 5.  Page 253 lines 22-35.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.  Automatically oscillator, 6, causes switch, 1, to shift its contact lever from the first alternate contact to the second alternate contact to which wireless transmissions are inputted and causes mixer, 3, to select the frequency of channel 5 and input said frequency of interest, at a fixed frequency, to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-5 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 5 is inputted to decoder, 30. Receiving said wireless-5 instruction causes control processor, 39J, to cause all apparatus of decoder, 30, to commence receiving, detecting, and processing SPAM message information embedded in the inputted frequency of interest.  Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40. Controller, 20, then transmits a particular preprogrammed radio-99.0 instruction to control processor, 44J, that informs said processor, 44J, 99.0 MHz is inputted to decoder, 40. Receiving said radio-99.0 instruction causes control processor, 44J, to cause all apparatus of decoder, 40, to commence receiving, detecting, and processing SPAM message information embedded in the inputted frequency of interest.
Column 8 lines 32-35.	The controller, 20, can instruct signal decoders, 30 and 40, when, where, and how to look for signal words, which allows signal words to be received in any pattern or patterns.	Page 33 lines 18-20.  For example, page 290 line 11 to page 291 line	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...  ... executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM

**Specification Correlation Chart**

		<p>4.</p>	<p>message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time (when said originating studio commences transmitting the "Wall Street Week" program), controller, 20, causes all apparatus of the TV signal decoder, 30, to delete from memory all information of received SPAM information; transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; causes said control processor, 39J, to cause digital detectors, 34, 37, and 38, to cease inputting detected information to controller, 39, and commence discarding said information (which said detectors, 34, 37, and 37, have capacity to do) and to cause particular apparatus of decoder, 30,--for example, line receiver, 33, and digital detector, 34--to commence receiving and inputting to controller, 39, SPAM information detected in the frequency inputted to decoder, 30; ...</p> <p>They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p>
<p>Column 8 lines 35-37.</p>	<p>[Controller, 20 can instruct buffer/ comparator, 8,] how to assemble signal words into signal units and join units together for further transfer and...</p>	<p>Page 13 lines 19-24.</p> <p>Page 33 lines 18-20.</p> <p>Page 37 line 31 to page 38 line 3.</p>	<p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital</p>

**Specification Correlation Chart**

			information that subscriber station apparatus can receive and process; ...
Column 8 lines 38-39.	...[Controller, 20 can instruct buffer/comparator 8] how to determine which signals to pass to decrypter, 10.	Page 39 lines 16-21.  Page 33 lines 18-20.  For example, page 147 lines 29-31.  For example, page 148 lines 4-16.	<p>Controller, 20, has capacity to preprogram (or reprogram) all said decoder apparatus, 27, 28, 29, 30, and 40, and thereby controls the fashions of detecting, correcting, converting, modifying, identifying, transferring, and other functioning of said decoders.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10; ...</p> <p>Controller, 20, is preprogrammed with ... Using preprogrammed information and instructions as required, said decrypt-a-00-header-message instructions transfer the received binary information of said second message from buffer/comparator, 8, to decryptor, 10, in the same fashion that the aforementioned transfer-a-00-header-message instructions controlled the transfer of the information of said message from controller, 39, to buffer/comparator, 8.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p>
Column 8 lines 39-40.	[Controller, 20] can tell decrypter, 10, when and how to change decryption patterns, fashions, and techniques.	Page 33 lines 18-20.  For example, page 147 lines 23-28.  For example, page 149 line 27 to page 150 line 6.	<p>Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10.</p> <p>Decryptor, 10, receives said key information and automatically commences using it as its key for decryption.</p> <p>Decryptor, 10, commences ... decrypting ... Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by</p>

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
	Specification Correlation Chart		
Column 8 lines 40-44.	<p>[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, 14.</p>	<p>Page 33 lines 18-20.</p> <p>Page 149 lines 8-15.</p> <p>For example, page 150 lines 29-35.</p> <p>For example, page 152 line 19 to page 153 line 1.</p>	<p>decryptor, 10, to controller, 12, without alteration.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...</p> <p>Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, to execute particular preprogrammed transfer- and-meter instructions ...</p> <p>Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message under control of said transfer-and-meter instructions commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions.</p> <p>Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synchronizing command in example #2 is called the "2nd meter information (#2).")</p> <p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>... buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information and for incorporating count information into signal records.</p>
Column 8 lines 44-46.	<p>[Controller, 20] can tell buffer/comparator, 14, what and how to count, what and how to mark signals, and what received signals to discard.</p>	<p>Page 32 lines 20-21.</p> <p>Page 32 lines 10-13.</p>	<p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>... buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information and for incorporating count information into signal records.</p>

1987 Language	1987 Spec Reference	1987 Language	1987 Spec Reference
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### Specification Correlation Chart

			<p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter &amp; monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter &amp; monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to ...</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Controller, 20, transfers the telephone number, 1-800-CHARGES, to auto dialer, 24, and causes the dialing of said number.</p> <p>Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.</p> <p>... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable</p>
For example, page 223 lines 22-33.			
For example, page 224 lines 12-16.			
Page 33 lines 18-20.			
Page 273 lines 4-6.			
Page 273 lines 21-25.			
Page 273 lines 6-8.			
Page 274 lines 11-13.			
Page 33 lines 18-21.			
Page 290 lines 26-31.			
Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.		
Column 8 lines 50-55.	The controller, 20, also controls the automatic telephone dialing device, 24, to allow the apparatus to automatically output its own information in accordance with a predetermined sequence and to change telephone numbers dialed as required.		
Column 8 lines 56-58.	To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus.		
Column 8 lines 58-60.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.		

1981 Spec/Reference	1981 Language	1987 Spec/Reference	1987 Language	Specification Correlation Chart
			control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...	
		Page 291 lines 21-24.	In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...	
		Page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.	
Column 8 lines 60-62.	An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.	Page 402 lines 22-26.	... causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.	
		Page 403 lines 7-12.	Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30. Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.	
		Page 405 lines 20-29.	Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...	
Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.	
		For example, page 531 lines 17-22.	Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...	
Column 8 lines 65-68.	Buffer/comparator, 14, has the capacity to pass received time signals to the controller, 20, in a predetermined fashion set by	Page 32 lines 24-32.	(In circumstances where information collecting and processing functions are extensive--for example, when a	

**Specification Correlation Chart**

	and changeable by controller, 20.		given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, ...  Automatically, under control of said process-monitor-info instructions, onboard controller, transmits to controller, 20, a particular preprogrammed instruct-to-record instruction that causes controller, 20, to cause onboard controller, 14A, to transmit the monitor record of said prior programming to recorder, 16, in a predetermined fashion and that causes controller, 20, to cause recorder, 16, to record said monitor record information in a predetermined fashion.  ... is described more fully below. Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements. Controller, 20, has capacity to turn off any ...  ... program instructions, to cause the control processor, 39J, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions ...  At each station where a match fails to occur—which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with—not resulting in a match causes the controller, 20, ...
Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they are instructed to look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.	For example, page 179 lines 24-32.  Page 33 lines 18-21.  For example, page 300 line 32 to page 301 line 1.  with respect to Page 301 lines 6-11.	

**IX. COLUMN 9**

Column 9 lines 4-8.	Oscillator, 6, the controller, 20, and buffer/comparator, 8, can interact in such a fashion that buffer, 8, can identify the channel that any given signal is received on and mark the	Page 258 lines 17-25.	... said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
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**Specification Correlation Chart**

	signal for subsequent identification of the channel.		<p>Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder,</p> <p>30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".) ...</p> <p>Receiving any given old programming message causes onboard controller, 14A, to ... determine that the channel mark ... in said old programming message matches the channel mark ... of a selected monitor information record previously initiated ...</p> <p>Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.</p> <p>In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic.</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Automatically said second computer responds with a</p>
Page 260 lines 5-13.			
Page 270 lines 5-12.			
Column 9 lines 8-10.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness...		
Column 9 lines 10-12.	to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data		
Column 9 lines 13-16.	...making memory available. In normal operation, controller,		



1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Specification Correlation Chart			

	20, may be instructed by the remote site to erase recorder, 16, which instruction controller, 20, effects through communication with recorder, 16,...	page 276 line 2.	particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.
Column 9 lines 16-19.	...however, controller may ignore such an instruction in a predetermined fashion, if the information in recorder, 16, is to be conveyed to more than one remote sites.	Page 273 line 30 to page 274 line 10.	Automatically said first computer determines, in a predetermined fashion, that the audit information has been received correctly and completely, and said determining causes said first computer automatically to transmit a particular transmission complete signal to controller, 20. Receiving said complete signal causes controller, 20, to cause telephone connection, 22, to terminate said telephone call. Then controller, 20, transfers information to recorder, 16, that causes recorder, 16, to erase from memory all said record and other information that is <i>not also meter charge information or monitor information</i> . Having completed the first stage, controller, 20, then commences automatically the second stage of said sequence which involves <i>transferring meter charge information</i> to a particular second host computer at a second remote station.
Column 9 lines 20-21.	The controller, 20, can shut off any element or elements of the apparatus in whole or in part.	Page 33 lines 21-23.	Controller, 20, has capacity to turn off any element or elements of controlled subscriber station apparatus, in whole or in part, ...
Column 9 lines 21-22.	It is interactive with external sources via telephone connection, 22,...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to-receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
Column 9 line 23.	...and can be reprogramed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain

**Specification Correlation Chart**

			<p>operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
Column 9 line 26.	Operation of Signal Processor Apparatus	See generally Page 86 line 31 to page 278 line 20	<p>with respect to page 555 line 24 to page 556 line 14.</p>
Column 9 lines 27-31.	The simplest forms of signal processor apparatus are each of the five paths described in Figures 2A, 2B, and 2C. Each path, by itself, is capable of identifying signals in the portions of programming transmissions that each receives.	<p>Page 34 lines 18-20.</p> <p>Page 17 lines 11-16.</p> <p>Page 15 lines 18-22.</p>	<p>Signal decoder apparatus such as decoder, 203, in Fig. 1 and decoders, 30 and 40, in Fig. 2 are basic in the unified system of this invention.</p> <p>Fig. 2A is a block diagram of a TV signal decoder apparatus.</p> <p>Fig. 2B is a block diagram of a radio signal decoder apparatus.</p> <p>Fig. 2C is a block diagram of an other signal decoder apparatus.</p> <p>... transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches,</p>

**Specification Correlation Chart**

Column 9 lines 31-33.	A digital signal is embedded by conventional generating and encoding means and transmitted in a television, radio or other transmission.		working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
		Page 22 lines 1-6.	... a first series of control instructions is generated, embedded sequentially on said line or lines of the vertical interval, and transmitted on the first and each successive frame of said television program transmission, signal unit by signal unit and word by word, until said series has been transmitted in full.
		Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
		Page 36 lines 2-3.	... processes signal information embedded in an inputted radio frequency.
		Page 36 lines 19-20.	... processes signal information embedded in a frequency other than a television or radio frequency.
Column 9 lines 33-40.	Each path is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	Figs. 2A-2C. Page 35 lines 1-6.	<i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.
		Page 35 lines 16-18.	The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.
		Page 35 lines 27-30.	The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...
		Page 36 lines 1-3.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.
		Page 36 lines 18-20.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

			other than a television or radio frequency.
Column 9 lines 41-44.	The signal processor apparatus described in FIG. 1 can identify such signals in multiple and variable locations in multiple and variable modes, channels, and transmissions.	Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. <i>See generally.</i>
Column 9 lines 44-47.	Such signals may be transmitted over and over continuously in such transmissions or they may be transmitted over and over only for predetermined time intervals.	Page 248 line 13 to page 271 lines 30. Page 457 line 12 to page 463 line 28. Page 14 lines 3-6.	<i>See generally.</i>  In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once. They may appear in various and varying locations.
Column 9 lines 47-52.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.  Page 257 line 24 to page 258 line 19.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.  Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at	Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next

**Specification Correlation Chart**

	a particular time interval.		<p>channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p>
Column 9 lines 55-57.	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 265 line 27 to Page 266 line 21.	
		Page 250 lines 13-17.	
		Page 251 lines 8-11.	
		Page 263 lines 19-24.	

**Specification Correlation Chart**

Column 9 lines 57-63.	The same controller will control buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decryptor, 10, and processor or monitor, 12, as required, and to perform such other functions as buffer/ comparator, 8, performs.	Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
		Page 146 line 31 to page 147 line 3.	Said failures to match cause the controllers, 20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to commence processing in the conventional fashion.)
		Page 258 lines 17-25.	... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.
		Page 260 lines 5-13.	... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".)
		Page 147 lines 29-31.	Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;
		Page 149 lines 17-20.	Next said decrypt-a-00-header-message instructions cause controller, 20, to cause buffer/comparator, 8, to transfer to decryptor, 10, a quantity of signal words of said binary information of the second message ...
		Page 149 lines 27-29.	

# **Specification Correlation Chart**

Column 9 lines 63-65.	The controller, 20, instructs decrypter, 10, what to decrypt and in what fashion.		<p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12,...</p> <p>Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10.</p> <p>Decryptor, 10, receives said key information and automatically commences using it as its key for decryption.</p> <p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.</p> <p>Then said decrypt-a-00-header-message instructions cause controller, 20, to transmit to controller, 12, a particular <i>transfer-decrypted-message instruction</i> and particular decryption mark information of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, to execute particular preprogrammed <i>transfer-and-meter instructions</i> then record said mark of key J at particular decryption-mark-@12 register memory.</p> <p>Under control of said <i>transfer-and-meter instructions</i>, controller, 12, commences receiving decrypted information of the second message from decryptor, 10.</p> <p>Automatically controller, 12, processes said information of the second message of example #2 as a SPAM</p>
Column 9 lines 65-68.	[Controller, 20] instructs processor or monitor, 12, how to identify what signals to pass externally and where to pass them and what signals to transfer to buffer/comparator, 14.	<p>Page 147 lines 23-28.</p> <p>Page 149 line 27 to page 150 line 6.</p> <p>Page 149 lines 8-16.</p> <p>Page 150 lines 7-9.</p> <p>Page 150 lines 16-21.</p>	

# Specification Correlation Chart

			<p>command. Receiving the header and execution segment causes controller, 12, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message accordingly.</p> <p>Receiving said complete-transfer-phase instruction causes controller, 12, to cease transferring information, under control of said <i>transfer-and-meter instructions</i>, to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions. Said meter instructions cause controller, 12, to ... transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark-@12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p>	<p>Page 152 line 18 to page 153 line 1.</p>
Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.		<p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter &amp; monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter &amp; monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion</p>	<p>Page 32 lines 20-21. Page 223 lines 22-33. Page 224 lines 12-18.</p>



**Specification Correlation Chart**

			then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
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**X. COLUMN 10**

Column 10 lines 2-4.	The controller activates digital recorder, 16, thus defining the location in memory of each of the signals and signal strings.	Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, ... and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
Column 10 lines 4-8.	The controller, 20, also controls the automatic telephone dialing device, 24, which can automatically output the digital information on the digital recorder, 12, to a remote site through a telephone connection, 22.	Page 273 lines 6-11.  Page 273 lines 21-25.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications.  ...causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
Column 10 lines 8-10.	The controller, 20, can also set the proper time into clock, 18, should this step be necessary.	Page 290 lines 14-16.	Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval....
Column 10 lines 10-13.	The controller, 20, operates in a predetermined fashion that can be altered by external means communicating by means of the telephone connection, 22.	Page 33 lines 18-21.  Page 273 lines 16-25.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor....  Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20. Receiving said start signal, sent automatically in response to controller, 20's, instruct-to-receive signal, causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
Column 10 line 14.	<b>Method of Use at an Intermediate Transmission Point</b>	See generally page 324	<b>Automating Intermediate Transmission Stations</b>

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
Specification Correlation Chart			

Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	line 7 to page 390 line 11. Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. ...stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming....
Column 10 lines 20-23.	They can be used in a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 12-14.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	The means and methods for transmitting conventional programming are well known in the art.
Column 10 lines 28-30.	The means for and method of transmission of programming described here is well known in the art.	Page 324 lines 21-23.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.
Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....
Column 10 lines 40-41.	All of these received transmissions feed into the facility by hard-wire and...	Page 324 lines 31-33.	...a conventional matrix switch, 75, well known in the art,....
Column 10 lines 41-42.	...connect, by means of conventional switches (here matrix switch, 75), to...	Page 324 line 34.	...one or more recorder/players, 76 and 78,....
Column 10 lines 42-43.	...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system,	Page 324 line 35.	...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
Column 10 lines 43-47.		Page 325 lines 1-4.	

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
92.			
Column 10 lines 48-49.	Programming can also be manually delivered to the facility on prerecorded video tapes and videodiscs.	Page 325 lines 5-6.	Programming can also be manually delivered to said station on prerecorded videotapes and videodiscs.
Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
Column 10 lines 53-57.	In the present art, the identification of incoming programming, however received; the operation of video player and recorder equipment, 76 and 78; and the maintenance of records of programming transmissions are all largely manual operations.	Page 325 lines 10-14.	In the prior art, the identification of incoming programming, however received; the operation of video player and recorder equipment, 76 and 78; and the maintenance of records of programming transmissions are all largely manual operations.
Column 10 lines 58-60.	FIGS. 3A, 3B and 3C shows the introduction of signal processing apparatus and methods to automate these and other operations.	Page 325 lines 15-16.	Fig. 6 shows the introduction of signal processing apparatus and methods to automate these and other operations.
Column 10 lines 61-63.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
Column 10 lines 63-64	They are fed along the conventional paths described above.	Page 324 lines 31-33.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....
Column 10 lines 64-66.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths.	Page 325 lines 17-21.	In line between each of the aforementioned receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths.
Column 10 line 66 to Column 11 line 1.	One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93.	Page 325 lines 21-24.	One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.
		Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions

# **Specification Correlation Chart**

			over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
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## **XI. COLUMN 11**

Column 11 lines 1-3.	The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 325 lines 24-27.	The other path inputs the transmission of said given receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
Column 11 lines 6-7.	...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.	Page 326 lines 7-11.	...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.
Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
Column 11 lines 12-14.	Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	Page 326 lines 16-18.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
Column 11 lines 18-21.	The controller/computer, 73, has means for receiving input information from local input, 74, and from remote sources via telephone or other data transfer network, 98.	Page 326 lines 27-30.	Computer, 73, has means for receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
Column 11 lines 22-24.	...with each discrete unit of programming identified with a unique program code...	Page 326 lines 31-33.	...with each discrete unit of programming identified by its own "program unit identification code" information.
Column 11 lines 25-28.	Such input information might also indicate when and where	Page 326 lines 33-35.	Such input information can indicate when and how the

**Specification Correlation Chart**

	the cable head end facility should expect to receive the programming.		station should expect to receive each program unit,....
Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
Column 11 lines 32-37.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.	Page 328 lines 2-7.	By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.
Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	...monitor information that identifies what programming is available,....
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Column 11 line 39.	with the programming schedule...	Page 328 lines 9-10.	...with information of the programming schedule,....
Column 11 lines 39-41.	...received earlier from local input, 74, and/or from a remote site via network, 98,...	Page 328 line 10.	...received earlier from input, 74, and/or network, 98, computer, 73,....
		Page 326 lines 28-30.	...receiving input information from local input, 74, and from

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

			remote stations via telephone or other data transfer network, 98.
Column 11 lines 41-43.	...controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 11-13.	... computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...
Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
Column 11 lines 46-50.	If incoming programming is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel.	Page 328 lines 18-22.	Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel.
Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
Column 11 lines 54-57.	...controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission,...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
Column 11 lines 60-61.	... controller/ computer, 73, selects a video recorder/player,	Page 329 lines 13-15.	So determining causes computer, 73, ... to select a video

**Specification Correlation Chart**

1987 Specification Reference	1987 Language	1987 Specification Reference	1987 Language
Column 11 lines 61-64.	76 or 78, ... ... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	recorder/player, 76 or 78, ... ... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
Column 11 lines 64-65.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
Column 11 lines 66-67.	Recorder/players, 76 and 78, can communicate programming with each other through matrix switch, 75.	Page 332 lines 24-30.	... causes computer, 73, ... to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record ... unit D.
		Page 333 lines 15-21.	Computer, 73, causes ... switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...
Column 11 line 67 to Column 12 line 1.	If controller/ computer, 73, determines at any time that it is necessary ...	Page 331 lines 17-33.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ...

**Specification Correlation Chart**

**XII. COLUMN 12**

Column 12 lines 1-3. ... to reorganize the order in which programming units are stored on either recorder/player or on both, ...	1981 Specification	1981 Language	1987 Specification	1987 Language
For column 12 lines 3-8 see the support provided above for column 16 line 67 to column 12 line 8.			Page 331 lines 16-25.  Page 334 lines 1-6.	<p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p>
	If controller/ computer, 73, determines at any time that it is necessary ...		For example, page 331 lines 17-33.  For example, page 332 lines 23-31.	<p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program</p>



1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language	Specification Correlation Chart
			unit D. ...	Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...
		For example, page 333 lines 15-21.		In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
Column 12 lines 8-12.	Were this head end facility equipped with automatic operating equipment well known in television studios, controller/computer, 73, could pass appropriate operating instructions to such equipment.	For example, page 365 line 22 to page 366 line 4.		Executing the information of said intermediate generation set causes computer, 73, also to generate a ... video image...
		For example, page 349 lines 14-20.		...and to organize the locations of the recorded program units, D, Q, W, and Y, to play according to the schedule inputted by said distribution station in the fashion described above (in the paragraph of the section, "AUTOMATING INTERMEDIATE TRANSMISSION STATIONS," that begins, "Computer, 73, has capacity for automatically organizing the locations of units...."
Column 12 lines 13-16.	Controller/computer, 73, monitors the operation of the head end facility by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.	Page 327 lines 13-15.		Computer, 73, monitors the operation of the head end station by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.
Column 12 lines 16-20.	Controller/computer, 73, has means to communicate control information with each decoder, 77, 79, 80, 84, and 88, to tell each how to operate and how and where to look for signals and to communicate other information.	Page 327 lines 15-18.		Computer, 73, has means to communicate control information with each decoder, 77, 79, 80, 84, and 88, to instruct each how to operate and how and where to search for SPAM information.
Column 12 lines 20-23.	(This particular embodiment could be expanded to include a decrypter, such as decrypter 10 in Fig. 1, in signals-only line between each decoder, 77, 79, 80, 84, and 88, and controller/computer, 73.)	Page 327 lines 13-15.		Computer, 73, monitors the operation of the head end station by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.
		Page 36 lines 32-33.		Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
		Page 156 line 33.		Fig. 3A shows one such preferred controller, 39.

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
<i>Specification Correlation Chart</i>			

Column 12 lines 24-26.	Decoders, 80, 84, and 88, inform controller/computer, 73, what programming is passing on each cable channel and what signals the programing contains.	Page 161 lines 34-35.  Page 327 lines 24-31.	As Fig. 3A shows, the preferred embodiment of controller, 39, also has a decryptor, 39K.  Computer, 73, monitors outgoing programming by means of decoders, 80, 84, and 88. By decoders, 80, 84, and 88, to select and transfer SPAM meter-monitor information and by comparing said information to information of its contained schedule records, computer, 73, can determine whether scheduled programming is being transmitted properly to field distribution system, 93, on each cable channel of the station of Fig. 6.
Column 12 lines 26-29.	Decoders, 77 and 79, inform controller/computer, 73, what specific programing is loaded on recorder/players, 76 and 78 respectively, and what signals it contains.	Page 330 lines 5-15.	Computer, 73, has capacity for determining what programming is prerecorded on the magnetic tapes (or other recording media) loaded on the recorders, 76 and 78, ... Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include ... "program unit identification code" ...
Column 12 lines 29-34.	(Among other signals, a program unit could contain signals that would inform controller/computer, 73, of the distance to the beginning and end of the program unit which signals would facilitate operation of recorder/ players such as 76 and 78.)	Page 330 line 5 to Page 331 line 3.	Computer, 73, has ... capacity for positioning the start points (or other selected points) of program units at the play heads of said recorders. Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point). ... (Such distance information can be embedded as SPAM message information segment information anywhere in the programming that SPAM information can be embedded ...
Column 12 lines 35-38	The cable head end facility also contains signal strippers, 81, 85, and 89, of which models exist well known in the art, that controller/computer, 73, can instruct to remove signals from programing as required,...	Page 354 lines 18-21.	Fig. 6 shows signal strippers, 81, 85, and 89, of which models exist well known in the art, that computer, 73, can cause to remove SPAM information from programming as required,....
Column 12 lines 38-41.	... and signal generators, 82, 86, and 90, also well known in the art, that controller/ computer, 73, can instruct to add	Page 354 lines 21-24.	... and signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM

1987 Specification	1987 Language	1987 Specification	1987 Language	Specification Correlation Chart
Column 12 lines 45-47.	signals to programming as required.		information as required.	
	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96,	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ....	
Column 12 lines 47-50.	which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93.	Page 337 lines 8-12	... which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.	
Column 12 lines 50-53.	Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 12-19.	By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.	
Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.	
Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....	
Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-26.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming by adding appropriate transmission and recorder/player means and decoder/detector means with control means and using the same processing and transmitting methods.	
Column 12 lines 61-64.	... by adding radio decoder paths and other signal decoder paths, as shown in FIGS 2B and 2C respectively, to signal processors, 71 and 96, and decoders, 77, 79, 80, 84, and 88.	Page 339 lines 16-21.	... by adding radio transmission and audio recorder/player means, each with associated radio decoder means as shown in Fig. 2B, wherever television means are shown in Fig. 6, all with similar control means to that shown in Fig. 6 and by processing radio programming with appropriately embedded signals according to the same processing and transmitting	

**Specification Correlation Chart**

			methods described above.
Column 12 lines 64-66.	Likewise, these methods are also applicable in a facility that transmits only a single channel of radio or television programming.	Page 339 lines 26-29.	This example has described methods at a multi-channel intermediate transmission station; the methods are also applicable in a station that transmits only a single channel of television, radio, broadcast print or data.
Column 12 line 67.	<b>Methods for Governing the Reception of Programming</b>	See generally page 278 line 22 to page 312 line 30.  See generally page 427 line 8 to page 447 line 23.	<b>Regulating the Reception and Use of Programming</b>

**XIII. COLUMN 13**

Column 13 lines 1-3.	FIGs 4A through 4E illustrate methods for governing the reception of programming and the use of signal processor apparatus in these methods.	Page 286 line 6.	Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System ...
Column 13 lines 3-9.	All of these methods involve the use of one or more devices, of which various models exist well known in the art, for the decryption of programming transmissions and/or one or more other means for interrupting programming transmissions, also well known in the art, which may be as simple as a switch...	Page 286 line 34 to page 287 line 2.	Fig. 4 shows ... three decryptors, 107, 224 and 231, a signal stripper, 229, and, ... -associated with matrix switch, 258.
Column 13 lines 9-12.	...and which may have means to interrupt programming by generating noise which noise may be an overlay of another audio and/or video transmission.	Page 279 lines 21-29.	Still other techniques, also well known in the art, involve controlling jamming means that spoil transmitted programming at stations that lack authorizing information or are determined not to be duly authorized, thereby degrading the usefulness of said programming. Such other techniques include, for example, inserting so-called "noise" into the transmitted programming which noise may be, for example, overlays of one or more separate transmissions.
Column 13 lines 13-14.	FIG 4A shows a signal processor, 100, and a programming decrypter and/or interrupt means, 101,...	Page 287 lines 22-27.	As Fig. 4 shows, signal processor, 200, controls all the aforementioned apparatus. Signal processor, 200, controls ... matrix switch, 258; ... decryptors, 107, 224 and 230;...
Column 13 lines 14-15.	...each of which receives the same transmission of programming.	Page 299 lines 19-30.	Automatically, controller, 20, causes matrix switch, 258, to transfer the ... video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive ... said video, and to transfer said decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 224, to ... signal processor, 200, ....

1981 Special Reference	1981 Language	1987 Special Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 13 lines 16-17.	The devices, 100 and 101, may receive one channel of programming or multiple channels.	Page 286 lines 9-12	The subscriber station of Fig. 4 has capacity for receiving wireless television programming transmissions at a conventional antenna, 199, and a multi-channel cable transmission at converter boxes, 201 and 222.
Column 13 lines 17-20.	The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programming uninterrupted may be embedded in the programming or may be elsewhere.	Page 291 lines 9-24	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...
Column 13 lines 20-21.	Signal processor, 100, identifies, evaluates, possibly decrypts, and passes...	Page 15 lines 7-31.	In the present invention, particular signal processing apparatus (hereinafter called the "signal processor") detect signals and, .... The scanners/switches, working in parallel or series or combinations, transfer the transmissions to

# **Specification Correlation Chart**

Column 13 lines 21-23.	...a signal or signals to decrypter/interrupter, 101, either at the time of receipt of such programming...		<p>receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; <b>decryptors</b> that may ... and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream. The processors and buffers can have inputs from each of the receiver/detector lines and <b>evaluate</b> information continuously. From the processors and buffers, the signals may be <b>transferred</b> to external equipment such as computers,....</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm....</p> <p>The second message conveys the second combining synchronizing command. In example #2, before said message is embedded at the program originating studio and transmitted, the execution segment of said command and all of the meter-monitor segment except for the length-token are encrypted, using standard encryption techniques, well known in the art, that encrypt binary information without altering the number of bits in said information. Partially encrypting the second message in this fashion leaves the cadence information of said message unencrypted. In other words, the "00" header, the length- token, and any padding bits added at the end of said message remain unencrypted. Said message is only partially encrypted in order to enable subscriber stations that lack capacity to decrypt said message to process the cadence information of said message accurately.</p> <p>In example #2, the encryption of said execution segment is done in such a fashion that, after encryption, said segment is identical to a particular execution segment that addresses</p>
		Page 295 lines 24-35.	<p>See also page 143, lines 10-30.</p>

**Specification Correlation Chart**

Column 13 lines 23-24.	...or at a delayed time or a combination.		URS signal processors, 200, and instructs said processors, 200, to use a particular decryption key J and decrypt the message in which said segment occurs. Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.	URS signal processors, 200, and instructs said processors, 200, to use a particular decryption key J and decrypt the message in which said segment occurs. Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
Column 13 lines 24-25.	The signal or signals instruct decrypter/interrupter, 101, to decrypt the transmission...		Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the 1st-stage-enable-WSW- program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job. Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.	Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the 1st-stage-enable-WSW- program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job. Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.
Column 13 lines 26-27.	...or not to decrypt the transmission or to interrupt the transmission...		Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 39J....  A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.  (Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with—not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program- enabling-message (#7) to be erased from all memory of said station ... thereby disabling said apparatus.)  ... a particular SPAM message that consists of ... 1st-stage-enable-WSW-program instructions ... (Hereinafter said	Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 39J....  A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.  (Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with—not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program- enabling-message (#7) to be erased from all memory of said station ... thereby disabling said apparatus.)  ... a particular SPAM message that consists of ... 1st-stage-enable-WSW-program instructions ... (Hereinafter said

19811 SpecReference	19811 Language	19871 SpecReference	19871 Language	Specification Correlation Chart
		<p>Thus preventing through erasure page 301 lines 32-34</p> <p>And page 310 lines 20-24.</p>	<p>message is called the "1st-WSW-program-enabling-message (#7)."</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said 1st-stage-enable-WSW-program instructions.</p> <p>...microcomputer, 205, to commence transferring the decrypted information of the transmitted video image to monitor, 202M, thereby causing monitor, 202M, to commence displaying, at its television picture tube, the information of the transmitted television image.</p>	<p>message is called the "1st-WSW-program-enabling-message (#7)."</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said 1st-stage-enable-WSW-program instructions.</p>
Column 13 line 27.	...or not to interrupt the transmission.	<p>Page 300 lines 30-32</p> <p>Page 301 lines 1-3</p> <p>Page 301 lines 32-34</p> <p>with respect to page 310 lines 20-24.</p>	<p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instructions, to cause the control processor, 39J,....</p> <p>A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said 1st-stage-enable-WSW-program instructions.</p> <p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instruct microcomputer, 205, to commence transferring the decrypted information of the transmitted video image to monitor, 202M, thereby causing monitor, 202M, to commence displaying, at its television picture tube, the information of the transmitted television image.</p>	<p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instruct microcomputer, 205, to commence transferring the decrypted information of the transmitted video image to monitor, 202M, thereby causing monitor, 202M, to commence displaying, at its television picture tube, the information of the transmitted television image.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected</p>
Column 13 lines 27-29.	The signal or signals may also inform decryptor/interrupter, 101, how to decrypt...			



**Specification Correlation Chart**

			<p>decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program transmission to matrix switch, 258.</p> <p>The second message conveys the second combining synch command. In example #2, before said message is embedded at the program originating studio and transmitted, the execution segment of said command and all of the meter-monitor segment except for the length-token are encrypted, using standard encryption techniques, well known in the art, that encrypt binary information without altering the number of bits in said information. Partially encrypting the second message in this fashion leaves the cadence information of said message unencrypted. In other words, the "00" header, the length- token, and any padding bits added at the end of said message remain unencrypted. Said message is only partially encrypted in order to enable subscriber stations that lack capacity to decrypt said message to process the cadence information of said message accurately.</p> <p>In example #2, the encryption of said execution segment is done in such a fashion that, after encryption, said segment is identical to a particular execution segment that addresses URS signal processors, 200, and instructs said processors, 200, to use a particular decryption key J and decrypt the message in which said segment occurs.</p>	<p>See also page 143, lines 10-30.</p>	<p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 39J,....</p> <p>(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program- enabling-message (#7) to be erased from all memory of said station....</p>
Column 13 lines 29-31.	...or interrupt the programming if decrypter/ interrupter, 101, is capable of multiple means.		<p>Page 300 lines 30-32.</p> <p>Page 301 lines 4-14.</p>		
Column 13 lines 31-32.	The signal or signals may transmit a code or codes necessary		Page 292 lines 7-11.		Receiving said message causes controller, 20, to load the

1981 Specification	1981 Language	1987 Specification	1987 Language	Specification Correlation Chart
	for the decryption of the transmission.		<p>enable-CC13 instructions and the enable-WSW instructions of the information segment of said message at particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job.</p> <p>An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art.</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....</p> <p>...thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program....</p>	<p>enable-CC13 instructions and the enable-WSW instructions of the information segment of said message at particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job.</p> <p>An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art.</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....</p> <p>...thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program....</p>
Column 13 lines 33-35.	FIG 4A also shows local input, 102, with means for generating and transmitting signals to signal processor, 100.	Page 288 lines 1-4.	Page 295 line 27 to page 296 line 2.	<p>Finally, Fig. 4 shows local input, 225, well known in the art, which has means for generating and transmitting control information to controller, 20, of signal processor, 100.</p>
Column 13 lines 35-36.	Local input, 102, is intended to permit a person at a local receiving site...	Page 288 lines 4-9.		<p>The function of local input, 225, is to provide means whereby a subscriber may input information to the signal processor of his subscriber station, thereby controlling the functioning of his personal signal processor system is specific predetermined fashions that are described more fully below.</p>
Column 13 lines 36-37.	...that is prevented, by any means, from receiving programming...	Page 286 lines 6-8.		<p>Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System that is the third feature of the present invention.</p>
Column 13 lines 37-39.	...to instruct signal processor, 100, that the site wants to be	Page 289 lines 22-33.		<p>In example #7, the controller, 20, of the signal processor,</p>

**Specification Correlation Chart**

	enabled to receive the programming.		200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable 13 commences. (So preprogramming controller, 20, can occur in several fashions. For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CCI3-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.)
Column 13 lines 39-40.	Local input, 102, may also serve other purposes.	Page 395 lines 30-33.	Local input, 225, has capacity to input control instructions to signal processor, 200, and enables the subscriber of the station of Fig. 7 to manually input control instructions at any relevant time.
Column 13 lines 40-41.	Local input, 102, may convey a continuous signal or an occasional signal or a one-time-only signal.	Page 289 lines 29-33.	For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CCI3-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.
Column 13 lines 42-43.	It may be activated by one or more switches or buttons or combinations.	Page 395 lines 30-33.	Local input, 225, has capacity to input control instructions to signal processor, 200, and enables the subscriber of the station of Fig. 7 to manually input control instructions at any relevant time.
Column 13 lines 43-44.	It may be a computer acting in a predetermined fashion.	Page 288 lines 9-13.	In the preferred embodiment, local input, 225, is actuated by keys that are depressed manually by the subscriber in the fashion of the keys of a so-called touch-tone telephone or the keys of a typewriter (or microcomputer) keyboard.
		Page 288 lines 13-20.	As Fig. 4 shows, microcomputer, 205, also has capacity for inputting control information ..., and in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 13 lines 44-47.	The signal may be input to signal processor, 100, as described in FIG 1, at buffer/comparator, 8, or signal processor or monitor, 12, or buffer/comparator, 14.	Page 289 lines 29-33.	For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CCI3-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.

1987 Specification Reference	1987 Language	1987 Specification Reference	1987 Language	Specification Correlation Chart
Column 13 lines 48-53.	In the preferred embodiment, local input, 102, inputs a one-time signal to signal processor, 100, at buffer/comparator, 8, and transmits information in a digital code signal which information is input to local input, 102, in an alphanumeric form manually by means of buttons.	Page 288 lines 9-13.	In the preferred embodiment, local input, 225, is actuated by keys that are depressed manually by the subscriber in the fashion of the keys of a so-called touch- tone telephone or the keys of a typewriter (or microcomputer) keyboard.	
Column 13 lines 54-56.	FIGs 4B and 4C illustrate various alternative ways that signals may be input to the signal processor, 100, 103, or 106 as applicable.	Page 286 lines 6-7.  Page 311 lines 17-28.	Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System ...  It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts without functionally departing from the spirit of the invention. ... And for example, the transmitted programming may be processed through fewer than three steps of decryption or more than three.	
Column 13 lines 56-60.	The fundamental point is that signals may be received in a manner that requires decryption and/or transmission by a decryptor/interruptor, 104, before they reach the signal processor, as with signal processor 103 in FIG 4B,	Page 299 lines 19-31.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion ... , to decrypt said information, and to transfer decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 224, to the output that that outputs to signal processor, 200, thereby causing signal processor, 200, to receive said information ....	
Column 13 lines 60-61.	...or they may not, as with signal processor 100 in FIG 4A,...	Page 291 lines 9-24.  Page 289 lines 25-27.	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... , to transmit a particular enabling SPAM message that consists of ... particular enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, and an end of file signal on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ....  ... said "Wall Street Week" program when transmission of said program on cable cable 13 commences.	

Column 13 lines 61-62.	...or some combination, as with signal processor 106 in FIG 4C.	Page 290 lines 28-29. Page 291 lines 9-28.	<p>...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system....</p> <p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... , to transmit a particular enabling SPAM message that consists of ... particular enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, and an end of file signal on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location.</p> <p>... "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p> <p>...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system...</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion ... , to decrypt said information, and to transfer decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 224, to the output that that outputs to signal processor, 200, thereby causing signal processor, 200, to receive said information ....</p>
Column 13 lines 63-68.	However, FIGs 4A, 4B, and 4C do not fully illustrate this point because these figures do not reveal that the question of	Page 149 line 27 to page 150 line 6.	<p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it</p>

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

	the need for decryption prior to reaching the signal processor depends, among other things, on where the signal or signals are placed in the incoming transmission.		to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.
Column 13 line 68 to column 14 line 1.	A decryptor does not necessarily decrypt the entire transmission.	Page 149 line 27 to page 150 line 6.	Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.

### XIV. COLUMN 14

Column 14 lines 1-2.	Encrypted transmissions may be only partially encrypted.	Page 288 line 30 to page 289 line 4.	In example #7, the program originating studio that originates the "Wall Street Week" transmission transmits a television signal that consists of so-called "digital video" and "digital audio," well known in the art. Prior to being transmitted, the digital video information is doubly encrypted, ... The digital audio is transmitted in the clear.
Column 14 lines 2-3.	For example, only the video portion of the transmission may be encrypted.	Page 288 line 33 to page 289 line 3.	Prior to being transmitted, the digital video information is doubly encrypted, ... The digital audio is transmitted in the clear.
Column 14 lines 4.	The audio portion may remain unencrypted.	Page 289 lines 3-4.	The digital audio is transmitted in the clear.
Column 14 lines 4-9.	In such a circumstance, a connection such as that shown in FIG 4B could pass unencrypted signals to signal processor	Page 297 lines 20-32.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said

**Specification Correlation Chart**

	103, while passing a transmission unsuitable for satisfactory viewing, if the signals were placed in the audio portion of the overall transmission.		program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of ... particular 1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, ... to detect the information of said message ...
Column 14 lines 10-12.	...a method that provides a signal or signals to signal processor, 106, prior to decryption...	Page 291 lines 9-24.	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions ... on the frequency of said master control channel. (Hereinafter said message is called the "local- cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message,....
Column 14 lines 12-14.	... which signal or signals enables decryptor/interruptor, 107, to decrypt and/or pass programming transmissions it receives...	Page 294 line 28 to page 295 line 34.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ... thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, ... causes decryptor, 107, to commence decrypting its received audio information, ...
Column 14 lines 14-17.	... then signal processor, 106, searches in a predetermined fashion for a second signal or set of signals in the decrypted output of decryptor/interruptor, 107.	Page 296 lines 3-23.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 107, to the output that that outputs to signal processor, 200, thereby

1981: Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
			causing signal processor, 200, to receive said information at a particular third alternate contact of switch, 1, (that is not shown in Fig. 2). Automatically, controller, 20, ... causes switch, 1, to connect to said third contact, thereby inputting said information to mixer, 3; and causes mixer, 3, (by control transmission means via oscillator, 6) to transfer said information without any modification; causes the control processor, 39J, of decoder, 30, to cause the filter, 31, and modulator, 32, to transfer said information without any modification; causes said control processor, 39J, ... to cause digital detector, 38, to commence inputting detected information to controller, 39; and causes said control processor, 39J, to commence waiting to receive the header information of a SPAM message.
		Page 300 lines 10-21.	In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information that is not a SPAM message and consists only of a particular check sequence of binary information followed by an end of file signal. (Hereinafter said SPAM check information is called the "1st- WSW-decryption-check (#7):" ) ... Receiving the binary information of said check sequence at decoder, 30, causes digital detector, 38, to detect said information and causes control processor, 39J, to...
Column 14 lines 17-21.	If this second signal or set of signals fails to appear in the form or forms and place or places and time or times that signal processor, 106, expects, signal processor, 106, can respond in a predetermined fashion and generate...	Page 301 lines 4-31.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station ... then to transmit the aforementioned appearance-of-tampering information together with complete information of the unique digital code that identifies said station uniquely. ... thereby disabling said apparatus.)
Column 14 lines 21-22.	...and record in digital recorder, 16 (referring to Fig. 1),...	Page 31 line 30 to page 32 line 2.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a



1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 14 lines 22-25.	...information that reports this fact in a predetermined fashion and/or transfer this information immediately to a remote site by telephone means and/or ...	Page 301 lines 4-25.	predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... , then to ... , to cause the auto dialer, 24, and telephone connection, 22, of said station to establish telephone communications with a particular predetermined remote station, in the fashion described above, and causes controller, 20, then to transmit the aforementioned appearance-of-tampering information together with complete information of the unique digital code that identifies said station uniquely. ...
Column 14 lines 25-27.	generate and transmit to decryptor/interruptor, 107, instructions that disable decryptor/interruptor, 107.	Page 311 line 33 to page 312 line 4.  Page 301 lines 4-31.	And for example, determining that a local station is not preprogrammed properly and/or that decryption ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating--eg., the local apparatus may disable local apparatus selectively and only partially by, for example, preventing a decoder, ...  (Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program- enabling-message (#7) to be erased from all memory of said station ... thereby disabling said apparatus.)
Column 14 lines 28-32.	FIG 4D shows that a multi-stage decryption/interruption process may be used in which transmissions must be processed by one or more additional decryptor/interruptors, 111, that follow decryptor/interruptor, 110.	Page 299 lines 13-27.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby

**Specification Correlation Chart**

			causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258.  Executing said 2nd-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, ... to affect a second and last stage of decrypting the digital video information of the "Wall Street Week" program transmission. ... Automatically, controller, 20, causes matrix switch, 258, ... to commence transferring the information inputted from decryptor, 224, to the output that outputs ... to decryptor, 231; ...
		Page 305 lines 9-31.	... indicating that decryptors, 224 and 231, are decrypting received information correctly.
Column 14 lines 33-35.	FIG 4E illustrates that the signal processor, 112, can monitor multiple channels and pass instructions to multiple decryptor/interruptors,...	Page 29 lines 8-15.	At switch, 1, and mixers, 2 and 3, signal processor, 26, monitors all frequencies or channels available for reception at the subscriber station of Fig. 2 to identify available programming. The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
		Page 287 lines 22-29.	As Fig. 4 shows, signal processor, 200, controls all the aforementioned apparatus. Signal processor, 200, controls ... decryptors, 107, 224 and 230; ...
Column 14 lines 35-37.	...each of which processes fewer channels than the multiple channels processed by signal processor, 112.	Page 299 lines 13-27.	Automatically, controller, 20, ... causes decryptor, 224, to commence decrypting any received information, ... and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer ... the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258.
		Page 305 lines 9-32.	Executing said 2nd-stage-enable-WSW-program instructions causes controller, 20, ... to commence

**Specification Correlation Chart**

			transferring the information inputted from decryptor, 224, to the output that outputs to signal stripper, 229; to commence transferring the information inputted from signal stripper, 229, to the output that outputs to signal generator, 230; to commence transferring the information inputted from signal generator, 230, to the output that outputs to decryptor, 231; and to commence transferring the information inputted from decryptor, 231, to ...  At switch, 1, and mixers, 2 and 3, signal processor, 26, monitors all frequencies or channels available for reception at the subscriber station of Fig. 2 to identify available programming.
Page 29, lines 8-11			...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions ... on the frequency of said master control channel. (Hereinafter said message is called the "local- cable-enabling-message (#7).")  In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message,...
Page 291 lines 10-24.			... said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ...  ...to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system...
Page 289 lines 25-27.			Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...
Page 290 lines 27-29.			... In the present invention, particular signal processing apparatus (hereinafter called the "signal processor") detect signals and, ... The scanners/switches, working in parallel or series or combinations, transfer the transmissions to
Page 294 lines 28-35.			
Page 15 lines 7-31.			
Column 14 lines 37-39.	FIG 4E illustrates how signals transmitted on one channel can govern the decryption and/or transfer of another channel.		
Column 14 lines 39-41.	Signal processor, 112, receives, evaluates, and processes a multiple channel transmission from cable transmission facility, 113.		

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
<b>Specification Correlation Chart</b>			
			receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; <b>decryptors</b> that may ... and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream. The processors and buffers can have inputs from each of the receiver/detector lines and <b>evaluate</b> information continuously. From the processors and buffers, the signals may be <b>transferred</b> to external equipment such as computers, ...
Column 14 lines 42-43.		289 lines 12-15.	In example #7, the intermediate station that retransmits "V'all Street Week" program information to the subscriber station of Fig. 4 is a cable television system head end (such as the head end of Fig. 6).
Column 14 lines 43-44.	Cable converter box, <b>114</b> , of which many types are now available,.... ...with means for informing signal processor, <b>112</b> , which channel of programming it is transferring,...	Page 295 line 8.	...converter box, 201, ....
Column 14 lines 45-46.	...receives the same multi-channel transmission and transfers one channel to decryptor/interruptor, <b>115</b> .	Page 295 line 6 to page 296 line 7.  Page 295 lines 6-29.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information;... thereby causing signal processor, 200, to receive said information ....  Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from said box, 201, to the output that outputs to television tuner, 215, and causes said tuner, 215, to tune to said selected frequency, thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the

**Specification Correlation Chart**

				output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion....
Column 14 lines 46-49.	The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,...		Page 299 lines 13-25.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information,....
Column 14 lines 49-50.	...in this case, is not located in the channel transmission.		Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 50-51.	They may be preprogramed into the signal processor (for example,...		Page 299 lines 13-17.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B,....
Column 14 lines 51-52.	...in programable random access memory controller, 20, in Fig. 1)...		Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 52-54.	...or they may be transmitted in a channel other than the channel being transferred from box, 114.		Page 293 line 20.	...such as, for example, the RAM of controller, 20;....
			Page 291 lines 10-20.	...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... <b>enable-CC13 instructions</b> and ... enable-WSW instructions that include particular enable-WSW-programming information, ... <b>on the frequency of said master control channel.</b> (Hereinafter said message is called the "local- cable-enabling-message (#7).") ...
			Page 289 lines 25-27.	... said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ...

1981: Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
		Page 290 lines 28-29.	...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system....
		Page 294 lines 28-35.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....
Column 14 lines 54-55.	If signal processor, 112, has been preprogrammed with the signal or signals....	Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 55-58.	...or if it has been informed of the predetermined fashion for identifying and processing the the needed signal or signals in the incoming transmission from facility, 113,...	Page 289 line 22 to page 290 line 10.	In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable 13 commences. ... Receiving any given instance of please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to select particular WSW-on-CC13-at-particular-8:30 information in said received information, record said selected information at particular memory, and execute particular receive-authorizing-info-at- appointed-time instructions. ....
Column 14 lines 58-59.	...for example, where to look for the signals...	Page 290 lines 11-12.	In a predetermined fashion, executing said instructions causes controller, 20,....
		Page 290 lines 26-30.	...causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200,....
		OR Page 298 lines 17-18.	Executing said 1st-stage-enable-WSW-program instructions causes controller, 20,....
		Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key

**Specification Correlation Chart**

Column 14 line 59.	...and when...	Page 290 lines 11-17.  OR  Page 297 lines 20-21.	Ba. ...  In a predetermined fashion, executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time....  Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, ...
Column 14 line 59.	...and how,...	Page 290 lines 11-12,  lines 21-26.  Page 291 lines 21-28.	In a predetermined fashion, executing said instructions causes controller, 20,...  ...transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 391, of said decoder, 30, and causes said control processor, 391, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6,....  In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. ...
Column 14 lines 59-61.	...signal processor, 112, can transfer the signal to decryptor/interruptor, 115.	Page 295 line 30 to page 296 line 1.  Page 299 lines 13-18.	Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion....  Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted





**Specification Correlation Chart**

			<p>receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion ... to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio).</p>	<p>Page 295 lines 6-30.</p>	<p>receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion ... to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio).</p>
Column 15 lines 9-11.	...in order to identify and process correctly the programming transmitted on another.		<p>In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information....</p> <p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 391, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions. A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.</p> <p>...controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video....</p>	<p>Page 300 lines 10-12,</p> <p>Page 300 line 30 to page 301 line 3.</p> <p>Page 299 lines 19-23.</p>	<p>In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information....</p> <p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 391, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions. A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.</p> <p>...controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video....</p>
Column 15 lines 11-12.	In Fig. 4E, the signal or signals needed to operate decryptor/interruptor, 115, correctly...		<p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p>	<p>Page 298 lines 17-21.</p>	<p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p>
			<p>Automatically, controller, 20, transfers said decryption</p>	<p>Page 299 lines 13-18.</p>	<p>Automatically, controller, 20, transfers said decryption</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<i>Specification Correlation Chart</i>			
			cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258.
Column 15 lines 13-14.	...may be on a separate channel of programming that is, itself, encrypted in transmission.	Page 297 lines 20-29.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of ... 1st-stage-enable-WSW-program instructions as the information segment information, and an .... (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).")
		Page 294 lines 33-35.	...to cause selected apparatus to decrypt the audio portion of said transmission, ....
Column 15 lines 14-15.	Signal processor, 112, can transfer the correct signal or signals...	Page 297 line 28 to page 298 line 9.	(Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, ... to execute the aforementioned transfer-this- message-to-controller-20 instructions. Executing said instructions causes said control processor, 39J, to transfer the information of said message to controller, 20, in the fashion of the local-cable- enabling-message (#7).
Column 15 lines 15-16.	...only if cable converter box, 117, is tuned to the proper channel and ...	Page 295 lines 6-30.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion ... to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio).
Column 15 lines 17-19	...decryptor/interruptor, 118, can transfer a correctly decrypted transmission to signal processor, 112, for processing.	Page 295 line 30 to page 296 line 6.	Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

			information, ... and outputting decrypted information of the audio portion ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 107, to the output that that outputs to signal processor, 200, ....
Column 15 lines 20-22.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion...	Page 311 line 33 to page 312 line 2.	And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating....
		Page 293 lines 32-35.	At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....
		Page 301 lines 6-9.	... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ....
Column 15 lines 22-25.	...and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	Page 308 line 35 to page 309 line 3.	At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly....
Column 15 line 26.	<b>Methods for Monitoring Reception and Operation</b>	Page 312 lines 6-8.	...may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.
		See generally page 162 line 27 to page 193 line 10, and page 312, line 32 to page 324 line 5.	<b>Monitoring Receiver Station Reception and Operation</b>
Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 28 lines 25-29.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
		Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local

1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

			apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
Column 15 lines 30-32.	Such statistics are necessary, for example, in the development of television program ratings.	Page 28 lines 29-35.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
Column 15 lines 33-39.	FIG 5 shows two conventional TV sets, 132 and 144, a conventional video cassette recorder, 135, a conventional videodisc player, 137, a conventional radio, 141, a conventional microcomputer, 142, a conventional data printer, 146, and a television set, 148, that is capable of displaying two different television programming transmissions at once.	Page 162 lines 31-34.	... signal processing apparatus and methods are used to collect monitor information for so-called "program ratings" (such as so-called "Nielsen ratings") that estimate the sizes of television (or radio) program audiences.
Column 15 lines 39-41.	This is only a representative group of equipment. Many other types of television and radio players and recorders could be included in FIG 5.	Page 313 line 16 to page 314 line 16.	Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses. Input apparatus include ... Laser disc player, 232, ... videodisc player" ... Intermediate apparatus include microcomputer, 205, radio tuner & amplifier, 213, TV tuner, 215, audio recorder/player, 255, and video recorder/player, 217, all of which are well known in the art ... Output apparatus that display or otherwise output programming selectively to human senses include, for example, TV monitor, 202M, multi-picture television monitor, 148, speaker system, 263, and printer, 221, ....
Column 15 lines 42-43.	Except for the videodisc player which neither records nor displays programming or other data,...	Page 314 lines 17-19.	(This is only a representative group of equipment; many other types of communications and computer apparatus could be included in Fig. 5.)
Column 15 lines 43-44.	...each unit has an appropriate associated signal decoder.	Page 313 lines 24-30.	Input apparatus include ... Laser disc player, 232, ... videodisc player" ...
Column 15 lines 44-46.	Each decoder is likely to be located physically inside its associated player/ recorder unit.	Page 314 lines 20-21.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders.
Column 15 lines 46-49.	Each is located at a point in the associated unit's circuitry where it receives every embedded signal on the programming	Page 314 lines 31-33.	At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
		Page 315 lines 14-19.	In the preferred embodiment, each one of said decoders is located at a point in the circuitry of its associated apparatus

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

	channel or data channel to which the unit is tuned...		where said one receives (so as to detect all SPAM information on) the information of the selected frequency, channel or transmission to which its associated apparatus is tuned.
Column 15 lines 49-51.	...for which signal the decoder is programmed in a predetermined fashion to search.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
Column 15 line 57.	The signals for which the decoders are monitoring...	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
Column 15 lines 58-60.	...are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
		Page 50 lines 14-20.	...unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
Column 15 lines 60-62.	They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
		Page 50 lines 1-4.	...origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times....
Column 15 lines 62-63.	They may convey unique identifier codes for each program or commercial.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such

1980 Specification	1981 Language	1987 Specification	1987 Language
Specification Correlation Chart			

			information include:
Column 15 lines 63-65.	In the case of data transmitted to the micro- computer, they may be unique codes that identify the source and suppliers of the data.	Page 50 lines 6-7.	...unique identifier codes for each program unit (including commercials); ... Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:.... ...unique codes that identify the sources and suppliers of computer data. ...and causes said AT&T news item to be printed at said printer, 221. ...meter-monitor segment that contains the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", ....
Column 15 lines 65-68.	In the case of data received at the printer, they may identify publications, articles, publishers, distributors, advertisements, etc.	Page 49 lines 26-28.  Page 50 lines 19-20.	The categories listed here provide only examples. Other types of information can exist in meter information and/or in monitor information, as will become apparent in this full specification.
Column 15 line 68- Column 16 line 2.	The decoders, 131, 136, 138, 143, 145, 147, 149, and 150, may search for many types of codes, and the types described here provide only examples.	Page 425 lines 35 to page 426 line 1.  Page 421 lines 13-15.  Page 50 lines 23-26.	

#### XVI. COLUMN 16

Column 16 lines 3-4.	In FIG 5, each decoder receives every relevant signal received by its associated player or recorder unit.	Page 314 lines 34-35.  Page 315 lines 20-24.	At any given subscriber station, any given SPAM decoder may merely monitor the operation of its associated....  Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
Column 16 lines 5-10.	For example, TV set, 131, may receive programming from many sources including cable converter box, 133, video cassette recorder, 135, and videodisc player, 137. In every programming unit played on TV set, 132, TV decoder, 131, receives every signal for which it is instructed to search in a predetermined fashion and...	Page 313 lines 16-23.	Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses.

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<i>Specification Correlation Chart</i>			
		Page 314 lines 20-28.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145.
Column 16 lines 10-11.	... transfers the signals to signal processor, 130,...	Page 315 lines 6-8.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means.
		Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
Column 16 lines 11-13.	... which has means to identify the source decoder from which each signal that it receives comes.	Page 322 lines 33-35.	... monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203.
		Page 174 lines 4-14.	Under control of said instructions, said match causes control processor, 39J, to cause matrix switch, 39I, to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, (while said switch is simultaneously transferring information from control processor, 39J, to the CPU of microcomputer, 205); to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....
Column 16 lines 13-18.	On all programming recorded by video cassette recorder, 135, decoder, 136, receives every relevant signal and transfers such signals to signal processor 130. Radio signal decoder, 138, operates similarly for radio, 141. Other signal decoder, 143, for microcomputer 142.	Page 314 lines 20-26.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. At radio tuner & amplifier, 138, are radio decoder, 138, and other decoder, 281. ... At video recorder/player, 217, is TV decoder, 218. At microcomputer, 205, is TV decoder, 203.
Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	Page 322 line 26 – Page 323 line 11.	The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is

**Specification Correlation Chart**

			inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.
Column 16 lines 21-24.	Other signal decoder, 147, for printer 146. And TV signal decoders, 150 and 149, for each channel of programming received and displayed by multi-picture TV set, 148.	Page 314 lines 20-30.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At multi-picture TV monitor, 148, are TV decoders, 149 and 150. ... At printer, 221, is other decoder, 227.
Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.	Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
Column 16 lines 35-39.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985.	Page 319 line 33 – Page 320 line 2.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission—from 7:00 PM to 7:30 PM on the evening of July 15, 1985.
Column 16 lines 39-41.	Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 320 lines 2-8.	Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
Column 16 lines 41-43.	Decoder, 136, would identify these signals and transfer them to signal processor, 130.	Page 320 lines 9-10.	... decoder, 218, would detect said information and transfer said information to signal processor, 200, ....
Column 16 lines 43-45.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening.	Page 320 lines 24-26.	Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening.
Column 16 lines 45-47.	This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 320 lines 27-31.	So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said



**Specification Correlation Chart**

				information, together with appropriate source mark information, to signal processor, 131....
Column 16 lines 47-49.	Prerecorded video cassettes and videodiscs could also contain unique embedded codes that would identify their usage...	Page 321 lines 1-5.		Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming....
Column 16 lines 49-50.	...(and could also transfer instructions to other external equipment).	Page 476 lines 18-22.		...this method enables any subscriber who records the transmission of said programming at a recorder/player, 217, to access the embedded information of said instructions automatically in this fashion whenever the recorded transmission of said programming is played back....
		Page 473 lines 14-17.		At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred....
Column 16 lines 51-54.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1),...	Page 315 lines 6-10.		Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, ....
		Page 32 lines 24-33.		(In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)
Column 16 lines 54-56.	...in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals come from...	Page 322 lines 33-35.		...that the source mark information identifies decoder, 282, rather than decoder, 203.
		Page 174 lines 4-17.		Under control of said instructions, said match causes control processor, 391, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....

**Specification Correlation Chart**

			Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
Column 16 lines 56-57.	...and, in a predetermined fashion, create a signal string...	Page 180 lines 1-3.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.
Column 16 lines 57-58.	...by appending digital information to the received signal which information might...	Page 297 line 15. Page 180 lines 4-15.	...creating a meter record that records the decryption.... Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
Column 16 lines 59-61.	...identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.	In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
Column 16 lines 61-62.	To minimize the use of data recorder, 16, buffer/comparator, 14,...	Page 323 lines 24-26.	In the preferred embodiment, to minimize unnecessary duplication, prior to retaining monitor information in signal records, onboard controller, 14A, is preprogrammed to....
Column 16 lines 62-64.	...may evaluate signals in a predetermined fashion and discard some signals rather than passing them to the recorder, 16.	Page 180 lines 1-2. Page 180 lines 13-15.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record.... ...select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

Column 16 lines 64-66.	It may compare each signal from a given source such as decoder, 131, with other signals received earlier from the same source.	Page 180 lines 20-21.  Page 178 lines 27-35.	... finally, to discard all unrecorded information of said 1st monitor information (#3) ... Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
Column 16 lines 66-67.	It may only count incoming duplicate signals...	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....
Column 16 lines 67 to column 17 line 1.	...or it may append a time code to the end of the basic signal string formed around the first received signal ...	Page 181 lines 12-15.	In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field locations....

### XVII. COLUMN 17

Column 17 lines 1-4.	...and alter this time designation each time a new duplicate signal is identified so that the time code identifies the time of receipt of the last duplicate signal.	Page 191 lines 11-21.	...onboard controller, 14A, to locate the instance of "program unit identification code" information at said SPAM-input- signal-@14A register memory, in the fashion described above; to locate the instance of "program unit identification code" information in the aforementioned new monitor record; and to compare said first named instance 'o said second named instance. A match results. Under control of said process- monitor-info instructions, said match causes onboard controller, 14A, to record date and time information, received from clock, 18, at the aforementioned last particular time field of said new monitor record and, in a ....
Column 17 lines 4-6.	Whatever method is used, the buffer/comparator, 14, may discard all duplicate signals received.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information ...
Column 17 lines 6-9.	At a time when buffer/comparator, 14, determines in a predetermined fashion that it will receive no further duplicate signals, it transfers the full signal string to recorder, 16.	Page 179 lines 14-24.	Automatically, said process- monitor-info instructions cause onboard controller, 14A, in a predetermined fashion, to locate the instance of "program unit identification code" information in said record of the prior programming

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
<b>Specification Correlation Chart</b>			
			displayed at monitor, 202M, and to compare said first named instance of "program unit identification code" information to said second named instance. No match results. Not resulting in a match causes onboard controller, 14A, to cause signal processor, 200, to record said said record of prior programming at recorder, 16.
Column 17 lines 10-12.	Signal divider, 139, illustrates another type of monitoring that signal processing apparatus and methods can facilitate.	Page 315 lines 25-28.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus,....
Column 17 lines 12-13.	Signal divider, 139, monitors the use of signals rather than the use of programming.	Page 315 lines 25-30.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions.
Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 315 line 30 to 316 line 6.	Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)
Column 17 lines 16-17.	... to be handled, recorded, and transmitted to a remote site with all other monitor information.	Page 28 lines 25-35	[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

# **Specification Correlation Chart**

Column 17 lines 17-21.	In a predetermined fashion, signal processor, 130, identifies and marks the source of signals as coming from a device, 139, monitoring signal usage rather than programming usage and viewership.	Page 322 lines 19-26.	For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 (which are not encrypted) will cause not only decoder, 203, to process the meter-monitor information of said messages and transmit the aforementioned 1st monitor information (#3) and 2nd monitor information (#3), via the monitor information bus means of Fig. 5, to onboard controller, 14A.
Column 17 lines 21-24.	In this fashion, besides facilitating data gathering on how programming is used, signal processing apparatus and methods also permit the evaluation of how equipment is used.	Page 174 lines 4-23.	Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203, ... then all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")
Column 17 lines 28-33.	...control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)	Page 312 lines 33-35.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and <b>modes of receiver station operation</b> and exemplifies one embodiment...
Column 17 lines 34-36.	<b>Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by</b>	Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
Column 17 lines 36-38.	<b>Passing Instruction and Information Signals that are Embedded in Television and Radio Programming Transmissions to Such External Equipment</b>	Page 390 line 13.	<b>Automating Ultimate Receiver Stations</b>
Column 17 lines 39-41.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions,...	Page 390 line 13 to page 556 line 32.	<i>See generally.</i>
		Page 15 lines 16-23.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...

1980 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

Column 17 lines 42-43.	... identify and discriminate among one or more pieces of external equipment ...	Page 34 lines 24-26.	... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus...
Column 17 line 43.	... to which such signals are addressed, ...	Page 44 lines 14-15.	A command is an instance of signal information that is addressed to particular subscriber station apparatus...
Column 17 line 44.	... and transfer such signals to such equipment as directed.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...
Column 17 lines 45-46.	This permits many valuable techniques for facilitating the operation of such external equipment.	Page 390 lines 26-29.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ultimate receiver stations in varieties of ways.
Column 17 lines 47-49.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
Column 17 lines 49-53.	Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
Column 17 line 54.	<b>Governing the Home or Office Environment</b>	See generally page 396 line 30 to page 406 line 31. (Page 396 line 30 quoted herein.)	<b>Automating U. R. Stations ... Regulating Station Environment</b>
Column 17 lines 55-56.	FIG 6A illustrates a method for governing a home or office environment.	Page 396 lines 31-33.	Fig. 7A illustrates methods for regulating automatically the environment of subscriber stations such as homes and offices.
Column 17 lines 56-62.	One or more channels of television programming transmissions inputted to signal processor, 200, and cable converter box, 201, may contain signals intended for microcomputer, 205, which signals convey information on local weather conditions. Such signals might include current outside temperature and barometric readings. They might include forecast data.	Page 396 line 33 to page 397 line 4.	Particular SPAM regulating messages are embedded in one or more television program channels that are inputted to signal processor, 200, and cable converter box, 201. Said messages include weather bulletin messages that convey local weather information and instructions, including, for example, current outside temperature information, barometric readings, and forecast data.
Column 17 lines 62-64.	Signal processor, 200, is always operating and monitors all incoming channels.	Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above:...
Column 17 lines 64-65.	It can convey such signals to microcomputer, 205, whenever it receives them.	Page 397 lines 22-26.	...and is preprogrammed at the controller, 39, of its decoder, 30, and at its controller, 12, to transfer to the decoder, 203, of the microcomputer, 205, of its station any detected SPAM message with an instance of particular URS-205 execution

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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**Specification Correlation Chart**

			segment information...
Column 17 line 65 to Column 18 line 1.	TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating.	Page 401 lines 19-23.	(TV signal decoder, 203, has capacity, itself, to detect said ...SPAM message but only when TV set, 202, is on and operating and when the frequency of said master channel is the one TV channel transferred by box, 201, to TV set, 202..

**XVIII. COLUMN 18**

Column 18 lines 1-2.	Decoder, 203, transfers all received signals to processor or monitor, 204, ...	Page 400 lines 3-4  Page 35 lines 11-15  Page 35 lines 24-27  Page 35 lines 28-31	Receiving said Weather-Bulletin-125 SPAM message causes decoder, 203, to ...  ... the overall video transmission and passes said information to a digital detector, 34, which acts to detect the digital signal information embedded in said information, using standard detection techniques well known in the art, and inputs detected signal information to controller, 39, which...  ... said audio information that is of interest. The digital detector, 37, detects signal information embedded in said audio information and inputs detected signal information to controller, 39.  ... separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal and inputs detected signal information to controller, 39.
Column 18 lines 2-4	... which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205.	Page 400 lines 6 - 18 See Fig. 3A regarding the composition of controller 39	Automatically, control processor, 39J, executes particular preprogrammed Weather-Bulletin controlled function instructions that cause said control processor, 39J, to locate the Weather-Bulletin-125 identification information of said message; to determine that said information does not match particular information at particular last-weather- bulletin-identification RAM associated with said control processor, 39J; to input the information of the information segment of said message to the CPU of microcomputer, 205; to retain information of said Weather-Bulletin-125 identification information at said last-weather-bulletin-identification RAM; and to cause said CPU to execute the information so inputted as a machine language job.
		Page 37 line 28 to page	Upon receiving any given instance of signal information,

# **Specification Correlation Chart**

			38 line 8	<p>controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed ... to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>So executing said information causes microcomputer, 205, to reducing the power usage of said air conditioning system, 207, causes any open windows at said station to be closed.</p> <p>In this fashion, SPAM messages can control and regulate the operation of individual subscriber station controlled apparatus (the thermostat control of furnace, 206, for example, could be similarly controlled) ....</p> <p><b>Automating U. R. Stations ... Coordinating a Stereo Simulcast</b></p>
Column 18 lines 4-7.	Microcomputer, 205, uses such received signals, in a predetermined fashion, to govern the operation of furnace, 206, air conditioning system, 207, and window opening and closing means, 208.		Page 400 lines 19-22.  Page 401 lines 14-17.	
Column 18 line 8.	<b>Co-ordinating a Stereo Simulcast</b>		See generally page 406 line 33 to page 419 line 31. (Page 406 line 33 quoted herein.) Page 406 lines 34-35.	
Column 18 lines 9-11.	FIG. 6B illustrates a method for automatic co-ordination of a multimedia presentation in one place, in this case a stereo simulcast.		Page 407 lines 9-11.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.
Column 18 lines 11-13.	A person decides to watch a program on television that is stereo simulcast on a local radio station, too.		Page 407 lines 12-15.	At the station of Fig. 7 and 7B, a subscriber decides to watch a particular television program the audio of which is stereo simulcast on a local radio station, .... Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202,....
Column 18 lines 13-14.	The person turns on television, 202, and tunes to the proper channel.		Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal.



1981 Spec. References	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 18 lines 17-19.	Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 408 lines 31-34.	Said message is detected at said decoder, 203, and inputted to said controller, 39, .... Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
Column 18 lines 19-22.	These signals instruct switch, 212, to turn power on to radio, 209, and its associated equipment, including a conventional digital tuner, 213.	Page 95 lines 18-24.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to ... . So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, switch power on to ... radio, 209, ....
Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
Column 18 lines 26-28.	Automatically, by turning TV set, 202, to the channel with a stereo simulcast, the person has activated the stereo simulcast.	Page 95 lines 18-24.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to ... . So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
Column 18 lines 29-30.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ....
Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and	Page 411 lines 6-9.	Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate the radio simulcast of said channel at radio, 209.
		Page 411 lines 10-11	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
		Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
		Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that

**Specification Correlation Chart**

	<p><b>210</b> respectively, determine to identify the programs, etc. on the channels to which TV set, <b>202</b>, and radio, <b>209</b>, are tuned,</p>	<p>Page 414 lines 13-27</p> <p>Page 15 lines 16-22</p> <p>Page 411 lines 10-15</p> <p>Page 418 line 23 to page 419 line 15.</p>	<p>consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, <b>203</b>, and inputted to said controller, <b>39</b>, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, <b>210</b>, and inputted to said controller, <b>44</b>.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, <b>14A</b>, of said signal processor, <b>200</b>, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, <b>14A</b>, of signal processor, <b>200</b>, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
<p>Column 18 lines 35-36.</p>	<p>The processors, <b>204</b> and <b>210</b>, transfer this information to signal processor, <b>200</b>, ...</p>	<p>Page 411 lines 10-15.</p>	<p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, <b>14A</b>, of said signal processor, <b>200</b>, in the fashion of example #3 above.</p>

### Specification Correlation Chart

			<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1<sup>st</sup>" monitor information (#3).")</p>
Page 418 line 23 to page 419 line 31			<p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p>
Page 36 lines 32-33.			
Page 38 lines 11-14.			
Page 173 line 30 to page 174 line 23.			
Page 411 line 28 to page 412 line 2.	... for recording and subsequent transmission to a remote data collection site.		
Page 419 lines 4-15.			<p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

			based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programing availability to record and transmit to a remote site.	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
Column 18 line 42.	Receiving Selected Information and/or Programming.	See generally page 419 line 33 to page 447 line 23. (Page 419 line 33 quoted herein.)	<b>Automating U. R. Stations ... Receiving Selected Programming</b>
Column 18 lines 43-45.	Figure 6C illustrates methods for monitoring multiple programming channels and selecting programming and information in a predetermined fashion.	Page 419 line 34 to Page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.
Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks...
Column 18 lines 47-48.	...and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 5-6.	...and to receive and process automatically news items about said stocks and about the industries of said stocks.
Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from

**Specification Correlation Chart**

	converter boxes, 222 and 201, and to signal processor, 200.		geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular A T&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit-News-Item SPAM message format and that consists of ... the "program unit identification code" information of said A T&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said A T&T news item, and an end of file signal.
Column 18 lines 55-56.	In a predetermined fashion, microcomputer, 205, instructs...	Page 288 lines 13-20.	As Fig. 4 shows, ... in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 18 lines 56-58.	...signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.	Page 420 lines 6-20.  Page 422 lines 33 to Page 423 line 4.	The signal processor, 200, of said station is preprogrammed ... with particular news- items-of-interest information that includes identification information of the particular stocks in said portfolio.... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T". ...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....

# **Specification Correlation Chart**

Column 18 lines 58-59.	Signal processor, 200, scans sequentially all channels.	Page 422 lines 23-25.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.
Column 18 lines 59-62.	When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13.  Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ....  Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.
Column 18 lines 65-67.	...and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ....	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)

## **XIX. COLUMN 19**

Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to	Page 419 line 34 to page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected
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**Specification Correlation Chart**

play or record.			programming and information.
Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 11 lines 5-10.	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.	Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
Column 19 lines 9-12.	When that time comes, microcomputer, 205, receives no program identification signals whatever from TV signal decoder, 203, which indicates that the set, 202, is not on.	Page 437 lines 1-3.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8-30 information to the controller, 20.
Column 19 lines 12-13.	Microcomputer, 205, instructs signal processor, 200, to...	Page 444 lines 33-34.	...decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by...
Column 19 lines 14-15.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 288 lines 13-20.	As Fig. 4 shows, ...in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
		Page 445 lines 8-10.	... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...
		Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
		Page 248 lines 22-26.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
		Page 250 lines 13-16.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week"

# **Specification Correlation Chart**

			<p>program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) ...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the</p>
Page 252 lines 15-35.			
Page 267 lines 20-28.			
Page 288 lines 16-20.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,...		
Column 19 lines 15-18.			
Column 19 lines 18-20.	...in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.		
Page 267 lines 20-28.			



1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
			<p><b>Specification Correlation Chart</b></p> <p>1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the</p> <p>1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that</p>
Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-25.	
		Page 267 lines 20-28.	
		Page 435 lines 16-25.	
		Page 436 line 9 to page 437 line 3.	

1987 Language	1987 Spec Reference	1987 Language	1987 Spec Reference
<b>Specification Correlation Chart</b>			
contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and <b>determines a match</b> with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.			
...to receive the transmission of cable channel 13;...	Page 439 lines 14-15.		
Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...	Page 437 lines 1-6.		
...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...	Page 439 lines 9-15.		
Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...	Page 295 lines 6-8.	...instruct tuner, 214, to switch box, 201, to channel X...	
...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...	Page 439 lines 9-15.		
...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....	Page 445 lines 24-27.	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	
...controller, 20, ... causes recorder/player, 217, to record	Page 446 lines 18-23.		

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

Column 19 lines 27-28.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.	said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,.... ...and to tune monitor, 202M, in a predetermined fashion.
Column 19 lines 28-29.	and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
Column 19 line 30.	<b>Co-ordinating Multimedia Presentations in Time</b>	See generally page 447 line 25 to page 457 line 10.	<b>Controlling Computer-based Combined Media Operations</b>
Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
Column 19 lines 37-39.	It may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
Column 19 lines 39-41.	It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. ...caused his microcomputer, 205, to be preprogrammed as described above,....
Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 450 lines 31-32.  Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said

**Specification Correlation Chart**

			second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		Page 37 line 26 to page 38 line 8	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202,...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
		Page 451 lines 7-11.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
Column 19 line 53.	...upon command.	Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio

1984 Spec Reference	1984 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programing ...	Page 25 line 34-36.	At this point, an instruction signal is generated at said program originating studio,...
Column 19 lines 62-63	... and is transmitted in the programing transmission.	Page 25 line 35 to page 26 line 1.	... embedded in the programming transmission, and transmitted.
Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

1981 Spec. Reference.	1981 Language.	1987 Spec. Reference.	1987 Language.
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# **Specification Correlation Chart**

## **XX. COLUMN 20**

Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record.	Page 419 line 34 to page 420 line 2.  Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.  The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.  The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20, ...decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by ....
Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.	Page 437 lines 1-3.	As Fig. 4 shows, ...in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 19 lines 9-12.	When that time comes, microcomputer, 205, receives no program identification signals whatever from TV signal decoder, 203, which indicates that the set, 202, is not on.	Page 444 lines 33-34.	... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...
Column 19 lines 12-13.	Microcomputer, 205, instructs signal processor, 200, to...	Page 288 lines 13-20.  Page 445 lines 8-10.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
Column 19 lines 14-15.	...pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 435 lines 16-18.  Page 248 lines 22-26.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.

**Specification Correlation Chart**

			<p>Page 250 lines 13-16.</p> <p>Page 252 lines 15-35.</p> <p>Page 267 lines 20-28.</p>	<p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) ...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal</p>
Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,...		Page 288 lines 16-20.	<p>...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p>
Column 19 lines 18-20.	...in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/		Page 435 lines 16-18.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal</p>



1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
	comparator, 14.	Page 267 lines 20-28.	<p>processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28.	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>By contrast, the...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
		Page 435 lines 16-25.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input... the information segment</p>

**Specification Correlation Chart**

			<p>of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</i></p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>
Column 19 lines 23-24.	Then, in a predetermined fashion, microcomputer, 205, may...	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...</p>
Column 19 lines 24-25.	...instruct tuner, 214, to switch box, 201, to channel X...	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

Column 19 lines 25-27.	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27.  Page 446 lines 18-23.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....  ...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
Column 19 lines 27-28.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,....
Column 19 lines 28-29.	and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.  Page 446 lines 17-21.	...and to tune monitor, 202M, in a predetermined fashion.  In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio,....
Column 19 line 30.	<b>Co-ordinating Multimedia Presentations in Time</b>	See generally page 447 line 25 to page 457 line 10.	<b>Controlling Computer-based Combined Media Operations</b>
Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27.  page 450 line 27 to page 451 line 11.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.  (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30

1981 Spec. Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	<p>PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&amp;T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>
Column 19 lines 37-39.	It may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	<p>Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p>
Column 19 lines 39-41.	It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data-transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. ...caused his microcomputer, 205, to be preprogrammed as described above;...
Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 450 lines 31-32.  Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4.  Page 37 line 26 to page 38 line 8	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.  In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202,...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
Column 19 line 53.	...upon command.	Page 451 lines 7-11.  Page 26 lines 20-28.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.  (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the	Page 25 lines 26-33.	During this time the program may show the so-called

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
<b>Specification Correlation Chart</b>			
	Dow Jones Industrials did is the past week, " and a studio generated graphic is pictured.		"talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 25 line 34-36.	At this point, an instruction signal is generated at said program originating studio,....
Column 19 lines 62-63	... and is transmitted in the programming transmission.	Page 25 line 35 to page 26 line 1.	... embedded in the programming transmission, and transmitted.
Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed.  TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the

1987 Spec Reference	1987 Language	1987 Spec Reference	1987 Language
			subscriber's own portfolio performance overlaid on the studio generated graphic.

### Specification Correlation Chart

#### XXI. COLUMN 21

Column 21 lines 1-2.	Using Signaling and Decryption Techniques to Control Distribution of Copyrighted Materials	See generally page 278 line 22 to page 312 line 30. Especially, page 312 lines 12-28.  See generally page 427 line 8 to page 447 line 23.  See generally page 533 line 23 to page 556 line 32. Especially, page 548 line 1 to page 549 lines 31.	Regulating the Reception and Use of Programming
Column 21 lines 3-8.	FIG 6E illustrates a signaling and decryption technique which could serve to facilitate the electronic distribution of copyrighted materials such as books and movies by tending to discourage piracy and the unauthorized retransmission of copies, whether they be properly acquired or pirated.	Generally, page 312 lines 12-20.  Page 306 lines 20-25.	And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television. And for example, the output apparatus may be speakers or one or more printers rather than a television monitor. And for example, rather than being a transmitter at a remote wireless or cable transmission station, the source of the transmission may be a local apparatus such as a video (or audio or digital information) tape recorder or a laser disc player, ....  (By causing information that identifies the station at which encrypted information is decrypted to be so inserted, the present invention makes it possible to identify particular stations where their information is misused--for example, if pirated decrypted copies of information are distributed, the station at which decryption occurred can be identified.... ... Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.
Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also	Page 534 lines 13-16.  Page 548 lines 24-30.	Automatically, under control of its specific received program

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
<b>Specification Correlation Chart</b>			
	distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.		instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
Column 21 lines 20-24.	A customer comes into the book store and asks to buy a title, hypothetically, <i>How to Grow Grass</i> . The salesman asks the customer for suitable identification, types into micro-computer, 205, the customer's name and address and that he wishes to purchase <i>How to Grow Grass</i> .	Page 548 lines 1-4.	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205,....
Column 21 lines 25-26.	Microcomputer, 205, may check to determine that the customer has no record as a pirate...	Page 549 line 19-21  Page 16 lines 24-26.  Page 293 lines 24-35.	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file.  Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates....  A match indicates that said sixteen contiguous bit locations that hold preprogrammed SPAM operating information are preprogrammed with properly. A match occurs at the station of Fig 4. (Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CC13 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion--.... ...each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
Column 21 lines 26-30.	...then transfers his name and address to buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, and instructs laser-videodisc system, 232, to transmit its encrypted copy of <i>How to Grow Grass</i> to printer or other means, 221,...	Page 548 lines 25-30.	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file.
Column 21 lines 30-32.	...via decryptors, 224 and 231. Laser system, 232, transmits one copy of the encrypted title to decryptor, 224, ...	Page 549 line 19-21.  Page 299 lines 19-22.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to



### Specification Correlation Chart

Column 21 lines 32-34	...and one to signal processor, 200, for processing and evaluation.	Page 297 lines 20-33.	<p>decryptor, 224, thereby causing said decryptor, 224,....</p> <p>Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of a "01" header, execution segment information that matches said enable-WSW- programming information, particular meter-monitor information, particular 1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J,....</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J, to select the information of the execution segment in said message and determine that said selected information matches the aforementioned instance of enable-WSW-programming information at said particular controlled-function-invoking information location. So determining a match causes said control processor, 39J, to execute the aforementioned transfer-this- message-to-controller-20 instructions.</p> <p>Each farmer has a subscriber station that is identical to the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232. Particular farm information of the specific farm of each farmer is recorded in a file named MY_FARM.DAT on a disk at the A: disk drive of the microcomputer, 205, of each station.</p>
Column 21 lines 35-36.	In the encrypted title, signal processor, 200, identifies one or more signal words.	Page 297 line 30 to page 298 line 5.	<p>Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the 1st-stage-enable-WSW- program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job.</p>
Column 21 lines 36-38.	If signal processor, 200, has the customer's name and address and the bookstore is a retail outlet in good standing...	Page 534 lines 1-8.	
Column 21 lines 38-40.	...that has received from a remote site program information on the predetermined fashions in affect,...	Page 298 lines 10-21.	

1981 Spec/Reference	1981 Language	1987 Spec Reference	1987 Language
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### Specification Correlation Chart

			Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.
Column 21 lines 40-43.	...signal processor, 200, decrypts the signal word or words and transfers them to decryptor, 224, to serve as the code for the first stage of decryption.	Page 299 lines 13-22.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224,...
Column 21 lines 44-45.	Decryptor, 224, then decrypts a part of the encrypted transmission...	Page 299 lines 22-27.	...thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258.
Column 21 lines 45-46.	...and passes the partly decrypted transmission to signal stripper, 229, and signal generator, 230.	Page 305 lines 22-32.	...to commence transferring the information inputted from said converter box, 201, to the output that outputs to television tuner, 215; to commence transferring the information inputted from decryptor, 224, to the output that outputs to signal stripper, 229; to commence transferring the information inputted from signal stripper, 229, to the output that outputs to signal generator, 230; to commence transferring the information inputted from signal generator, 230, to the output that outputs to decryptor, 231; and to commence transferring the information inputted from decryptor, 231,...
Column 21 lines 46-51.	In the decrypted portion of the partially decrypted transmission, signal processor, 200, identifies a second signal word or set of words which it decrypts in a predetermined fashion and passes to decryptor, 231, to serve as the code basis for the second stage of decryption.	Page 304 lines 10-11.  Page 304 line 23 to page 307 line 8.	(Hereinafter, each of said SPAM messages is called a "2nd-WSW-program-enabling-message (#7).")  Automatically, decryptor, 39K, decrypts the encrypted information of said message and transfers said message to EOFs valve, 39H. Automatically, EOFs valve, 39H, inputs the information of said message, unencrypted, to control processor, 39J, until the end of file signal of said message is detected. Automatically, control processor, 39J, determines that the unencrypted information of the execution segment of said message matches the aforementioned instance of enable-WSW-programming information at said particular

**Specification Correlation Chart**

			controlled-function-invoking information location and executes the aforementioned transfer-this-message-to-controller-20 instructions. Executing said instructions causes the transfer of the remove.) Automatically, controller, 20, selects information of the aforementioned first three of the last four significant digits of the binary information of the aforementioned unique digital code at ROM, 21 and computes a particular Q quantity according to a particular formula that is preprogrammed in said 2nd-stage-enable-WSW-program instructions. ... The information of said Q quantity is the decryption key Aa.
Column 21 lines 51-53.	Signal processor, 200, also may instruct signal stripper, 229, to remove this second signal word or words.	Page 305 line 34 to page 306 line 4.	Automatically, controller, 20, causes signal stripper, 229, to strip information, in a fashion well known in the art, from a particular strip-designated portion of the video transmission received at said stripper, 229, and transfer the received video, without said stripped information, to matrix switch, 258.
Column 21 lines 53-63.	Signal processor, 200, also passes the customer's name and address and its own unique apparatus identifier code from read only memory, 21, to signal generator, 230, which generates a signal embedding the customer's name and address and the retail outlet's identification in the programming in a suitable place or places in a suitable fashion. (Signal processor, 200, may also transmit the customer's name and address to printer or other means, 221, for actual printing of the customer's name and address in the text.) The transmission then passes through decryptor, 231, which completes the decryption process...	Page 306 lines 11-19.	Automatically, controller, 20, selects complete information of the aforementioned unique digital code at ROM, 21, transmits said complete information to signal generator, 230, and causes said generator, 230, to insert said complete information, in a predetermined periodic fashion and in an inserting fashion well known in the art, into a particular insertion-designated portion of the video transmission received at said generator, 230, and to transfer the received video, with said inserted information, to matrix switch, 258.
Column 21 lines 63-65.		Page 305 lines 29-31, and lines 14-16.	...to commence transferring the information inputted from signal generator, 230, to the output that outputs to decryptor, 231;... ...and to affect a second and last stage of decrypting the digital video information of the "Wall Street Week" program transmission.
Column 21 lines 65-66.	...and passes the decrypted programing transmission to printer or other means, 221,...	Page 309 line 27 to page 310 line 3.	Determining that signal stripper, 229, and that signal generator, 230, are stripping and inserting correctly (after having determined that that decryptors, 224 and 231, are decrypting correctly) causes the controller, 20, of the station of Fig. 4 (and causes controllers, 20, at other stations where so determining occurs) to execute particular additional 2nd-stage-enable-WSW-program instructions, and executing said instructions causes controller, 20, to cause the apparatus of the station of Fig. 4 to commence transferring the

**Specification Correlation Chart**

			decrypted ... information ... to microcomputer, 205, ...
		Page 312 lines 12-14.	And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television.
Column 21 lines 66-67.	...and also to signal processor, 200.	Page 305 lines 31-34.	...and to commence transferring the information inputted from decryptor, 231, to the output that outputs to said third alternate contact of switch, 1.
Column 21 line 67 to column 22 line 2.	Signal processor, 200, receives and analyzes the signal content of the programming output of decryptor, 231 to ensure that stripper, 229, and and generator, 230, have functioned properly.	Page 308 lines 13-30.	Receiving said signal causes controller, 20, under control of said 2nd-stage-enable-WSW-program instructions, to cause said control processor, 391, to transfer to controller, 20, selected information of said check sequence; to compare said selected information to selected information of said 2nd-stage-enable-WSW-program instructions; and to determine that a match results, indicating that decryptors, 224 and 231, are decrypting received information correctly. Determining a match causes controller, 20, to determine, in a predetermined fashion, that signal stripper, 229, is correctly stripping information from the aforementioned strip-designated portion of the video transmission and transferring received video without said stripped information and that signal generator, 230, is correctly inserting complete information of the aforementioned unique digital code into the aforementioned insertion-designated portion of the video transmission and transferring received video with said inserted information.

**XXII. COLUMN 22**

Column 22 lines 2-4.	If they have not, signal processor, 200, shuts down the decryption of the title and prevents its delivery to the customer.	Page 308 line 31 to page 309 line 11.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 2nd-stage-enable-WSW-program instructions and verify the correct functioning of local signal strippers, 229, and generators, 230. At each station where a controller, 20, determines that a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--or determines that a stripper, 229, or a generator, 230, fails to function correctly, so determining match causes said controller, 20, to cause all information of
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### Specification Correlation Chart

			said 2nd-WSW-program-enabling-message (#7) to be erased from all memory of said station except for a particular portion of said 2nd-stage-enable-WSW-program instructions loaded at the RAM of said controller, 20.....
Column 22 line 5	<b>The General Case</b>		<b>A Summary Example #11 ... and the General Case</b>
Column 22 lines 6-15.	It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts without functionally departing from the spirit of the invention. FIG 6 should make this clear. The receiver site depicted in FIG 6 has multiple means for receiving programming transmissions. All received programming is analyzed and evaluated by signal processor, 200.	See generally page 533 line 23 to page 557 line 32.  Page 556 line 33 to page 557 line 32.	It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts or in the methods of their functioning without functionally departing from the spirit of the invention. Any SPAM message and any other programming transmission can be caused, through encryption/decryption and other SPAM regulating techniques of the present invention, to take affect fully only selected stations and station apparatus. Because any transmission station can invoke any SPAM controlled function by transmitting a SPAM message with meter-monitor segment information, invoking any given, SPAM controlled function can also cause meter information and or monitor information to be processed in the fashions described above at apparatus and stations where said controlled function is invoked. Intermediate transmission stations can be equipped with SPAM regulating capacity such as that illustrated in Fig. 4, monitoring capacity such as that illustrated in Fig. 5, and control information switching and bus communications capacity such as that illustrated in Figs. 7 and 8. Controlling such capacity by means of transmitted SPAM messages, a remote network origination and control station can transmit programming to intermediate transmission stations, regulate and meter the use of said programming at said stations, monitor the use and usage of said programming at said stations, and control communication of control information at said stations all in the fashions that apply above to ultimate receiver stations. And any given transmission station can cause its receiver stations to function automatically not only in the fashions described above in the sections on automating ultimate receiver stations but in any appropriate fashion that a network origination and control station can cause intermediate transmission stations to function automatically.

**Specification Correlation Chart**

Column 22 lines 15-20.	Working with microcomputer, 205, which is preprogrammed to present received programming in predetermined fashions determined at the receiver site, signal processor, 200, permits and facilitates such presentations in accordance with the intentions of the suppliers of the programming at remote sites.	Page 428 line 21 to page 429 line 17.	<p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. In a predetermined fashion, said subscriber has caused to be included in said program-unit-of-interest information. (Microcomputers, 205, of selected other stations of said large plurality of stations are also so preprogrammed.) The station-specific-television-program-selection-and-display instructions at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular information that said subscriber will pay up to a certain limit--for example, twenty-five cents--to be permitted to receive said program and that, if the TV set, 202, of said station is switched off when information of the transmission of said program is detected, power should be switched on to said TV set, 202, and said program should be displayed at the monitor, 202M, of said set and, in addition, power should be switched on to the video recorder/player, 217, of said station, and said program should be recorded at said recorder/player, 217.</p> <p>The signal processor, 200, of said station scans sequentially all received television transmission channels in the fashion described above and is preprogrammed at the RAM associated with the control processor, 391, of its decoder, 30, to respond in a particular controlled function fashion whenever a SPAM message with an execution segment of particular available-television-program information is detected. Said signal processor, 200, has capacity for actuating and tuning TV set, 202, and video recorder, 217, and for controlling microcomputer, 205.</p> <p>Automatically, controller, 20, transmits particular information to said decoder, 145, that causes said decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by transmitting particular 202M-is-not-on information to controller, 20, via said link.</p> <p>The fact that monitor, 202M, is not on signifies that the subscriber of the station of Fig. 7 is not viewing television information at monitor, 202M, and suggests that said subscriber may not even be present at said station.</p>
Column 22 lines 20-24.	Working together, signal processor, 200, and microcomputer, 205, can control all local equipment and manage local presentations in any fashion feasible given the nature of the local equipment and the programming.	Page 444 line 31 to page 445 line 22.	

**Specification Correlation Chart**

			<p>Receiving said 202M-is-not-on information causes controller, 20, under control of said additional 2nd-stage-enable-WSW-program instructions, to cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, which instructions reflect the the specific fashion in which said subscribe wants any given selected program to be selected and displayed. Automatically, controller, 20, inputs a particular choose-mode-of-selection-and-display instruction and said 202M-is-not-on information to microcomputer, 205, and receiving said instruction and said information causes microcomputer, 205, in a predetermined fashion, to process the aforementioned station-specific-television-program-selection-and-display instructions. Automatically, under control of said instructions, microcomputer, 205, inputs to controller, 20, particular preprogrammed display-at-202M-and-record-at-217 instructions.</p>
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**APPENDIX D**

**GLOSSARY OF DEFINED TERMS  
TO THE 1987 PRIORITY INSTANT SPECIFICATION**



# GLOSSARY OF DEFINED TERMS

## 1987 Priority U.S. Patent Application

The following terms are defined and used in specific ways in U.S. Patent No. 4,965,825 and its continuations, including Applicants' instant specification. Terms that appear at the left margin in quotation marks are formally defined in the patent disclosures. The meanings of terms that are shown below without quotation marks are made clear in the context in which they appear.

### A

### B

"broadcast" ... page 12 line 22 ... to transmit programming over-the-air.

"broadcast print" ... page 1 line 25 ... Radio and electronic print services such as stock brokers' so-called "tickers" and "broad tapes" are ... powerful, user friendly mass media. (Hereinafter, the electronic print mass medium is called, "broadcast print.")

### C

cadence information ... page 60 line 12 ... Cadence information which consists of headers, certain length tokens, and signals that are called "end of file signals" enables subscriber station apparatus to distinguish each instance of header information in any given message stream and, hence, to distinguish the individual messages of said stream. In the present invention, subscriber station apparatus are preprogrammed to process cadence information.

"cablecast" ... page 12 line 23 ... to transmit programming over hard-wire.

"combined" media ... page 2 line 17 ... Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)

"combining synch command" ... page 26 line 20 ... (Hereinafter, an instruction such as the above

signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)

command ... page 44 line 12 ... As Fig. 2E shows, [a] header and execution and meter-monitor segments constitute [one form of] a command.

A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.

A command is always constituted of at least a header and an execution segment. With respect to any given command, its execution segment contains information that specifies the apparatus that said command addresses and specifies a particular function or functions that said command causes said apparatus to perform. (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")

Commands often contain meter-monitor segments. ...

...

... page 47 line 11 ... Commands can address many apparatus and execute many controlled functions.

"control invoking instructions" ... page 23 line 24 ... see "invoking broadcast control"

"controlled functions" ... page 44 line 22 ... (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")

...

... page 46 line 8 ... Examples of controlled functions include:

Load and run the contents of the information segment.

Decrypt the execution segment using decryption key G.

Decrypt the execution and meter-monitor segments using decryption key J.

Commence the video overlay combining designated in the meter-monitor segment.

Modify the execution segment to instruct URS microcomputer, 205, to commence overlay designated in meter-monitor segment, record the contents of the execution and meter-monitor segments, and transfer command to URS microcomputer, 205.

Print the contents of the information segment.

Record the contents of the execution and meter-monitor segments; transfer them to URS decryptors, 224, and execute the preprogrammed instructions that cause URS decryptors, 224, to commence decrypting with said contents as decryption key; execute preprogrammed instructions that cause URS cable converter boxes, 222, to switch to cable channel Z; execute preprogrammed instructions that cause URS matrix switches, 258, to configure its switches to transfer the input from converter boxes, 222, to decryptors, 224, and the output from decryptors, 224, to microcomputers, 205; modify the execution segment to instruct URS microcomputers, 205, to commence loading and executing the information received from URS decryptors, 224 via URS switches, 258.

"controller, 39" ... page 156 line 26 ... More precisely, controller, 39, of decoder, 203, and SPAM-controller, 205C, are one and the same (and are called, hereinafter, "controller, 39"). Thus the preferred embodiment of controller, 39, is configured and preprogrammed not only to control the detecting, correcting, converting, and executing of controlled functions at decoder, 203, but also to input to and execute at microcomputer, 205, the information of any given detected SPAM message that is addressed to URS microcomputers, 205.

"covert control" ... page 218 line 6 ... By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")

"covert control-invoking value" ... page 285 line 7 ... (Hereinafter, the normal binary value of a given instance of information that invokes a preprogrammed function--such as, for example, the "100110" that is the normal value of said execute-conditional-overlay-at-205 information--is called a "standard control-invoking value", and a value that temporary replaces a standard control-invoking value in the course a covert control application-- such as "111111" in example #6--is called a "covert control-invoking value".)

"CPU" ... page 22 line 33 ... central processor unit ... also defined at page 87 line 21 as ... central processor unit

## D

"data module set" ... page 365 line 24 ... (Hereinafter, a data module that is transmitted to subscriber stations and processed by computers of said stations under control of instructions of a

program instruction set is called a "data module set,"

"data module set of Q" ... page 366 line 18 ... (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)

"data module set of Q.1" ... page 378 line 31 ... (Hereinafter, the data module set generated at the station of Fig. 6 in example #10 is called the "data module set of Q.1", signifying that said set is one version of complete data module set information of said instance of the network transmission of Q.)

"data module set of Q.2" ... page 380 line 33 ... [Hereinafter, the data module set generated at said second station is called the "data module set of Q.2", signifying that said set is a second version of complete data module set information of said instance of the network transmission of Q.])

## E

end of file signals ... page 62 line 26 ... distinctive end of file signals are required to communicate the locations of the ends of information segments to subscriber station apparatus. In the present invention, each end of file signal is transmitted immediately after the end of an information segment; said signal is part of the information of the message in which said segment occurs; and said signal is located at the end of said message.

At any given time, subscriber station apparatus are preprogrammed to process only one distinct signal as an end of file signal. In order for said apparatus to distinguish an instance of said signal from all other signal information, an end of file signal must differ distinctly from all other information. Signal information, especially information transmitted in an information segment, can vary greatly in composition. Accordingly, to be distinctive, an end of file signal must be long and complex to detect.

An end of file signal consists of a particular sequence of bits of binary information. In the preferred embodiment each bit is identical to every other bit; that is, disregarding error correction information, an end of file signal consists of a sequence of "1" bits (eg. "11111111") or "0" bits (eg. "00000000"). In the preferred embodiment, end of file signals are composed of "1" bits rather than "0" bits.

see EOFS, EOFS bit and MOVE bit

EOFS ... refers to End Of File Signal ... see end of file signals

"EOFS bit" ... page 64 line 1 ... An end of file signal consists of a particular sequence of bits of binary information. In the preferred embodiment each bit is identical to every other bit; that is, disregarding error correction information, an end of file signal consists of a sequence of "1" bits (eg. "11111111") or "0" bits (eg. "00000000"). In the preferred embodiment, end of file signals are composed of "1" bits rather than "0" bits. Zero is a value that occurs frequently in data and in mathematics, and however many bits may occur in a binary data word that consists of a series of "0" bits, the numeric value of said word remains zero.

Numeric values that are represented in binary form by a sequence of "1" bits, especially a sequence that is long, occur in data and mathematics far less frequently than zero. Thus the preferred composition bit is "1" because the chance of data being joined in a given signal in such a way that two or more instance of information combine inadvertently and create the appearance of an end of file signal is far smaller if the preferred bit is "1" than if it is "0". (Hereinafter, the preferred binary end of file signal composition bit, "1", is called an "EOFS bit," and for reasons that are explained below, the alternate binary bit, "0", is called a "MOVE bit.")

"EOFS Complete Flag" ... page 69 line 10 ... see EOFS valve components

"EOFS Empty Flag" ... page 69 line 10 ... see EOFS valve components

"EOFS Standard Length Location" ... page 69 line 10 ... see EOFS valve components

"EOFS Standard Word Location" ... page 69 line 10 ... see EOFS valve components

"EOFS valve" ... page 65 line 19 ... an apparatus, called an "EOFS valve," that detects end of file signals

EOFS valve components ... page 69 line 10 ... In the present invention, any microprocessor, buffer/comparator, or buffer can be adapted and preprogrammed to detect end of file signals.

At any given SPAM apparatus that is so adapted and preprogrammed, particular dedicated capacity exists for said detecting. Said capacity includes standard register memory or RAM capacity, well known in the art, including three particular memory locations for comparison purposes, one particular memory location to serve as a counter, and three so-called "flag bit" locations to hold particular true/false information. (Hereinafter, said three particular memory locations, said one particular memory location, and said three flag bit locations are called the "EOFS Word Evaluation Location," "EOFS Standard Word Location," and "EOFS Standard Length Location"; the "EOFS WORD Counter"; and the "EOFS WORD Flag," "EOFS Empty Flag," and "EOFS Complete Flag" all respectively.)

"EOFS WORD" ... page 70 line 12 ... (Hereinafter, one signal word of EOFS bits is called an "EOFS WORD.")

"EOFS WORD Counter" ... page 69 line 10 ... see EOFS valve components

"EOFS Word Evaluation Location" ... page 69 line 10 ... see EOFS valve components

"EOFS WORD Flag" ... page 69 line 10 ... see EOFS valve components

"EPROM" ... page 33 line 17 ... erasable programmable ROM [or other forms of programmable nonvolatile memory]

execution segment ... page 45 line 22 ... Execution segment information includes the subscriber station apparatus that the command of said segment addresses and the controlled functions said apparatus is to perform. ("ITS" refers, hereinafter, to intermediate transmission station apparatus, and "URS" refers to ultimate receiver station apparatus.) [Some] examples of addressed apparatus include:

ITS signal processors (in 71 in Fig. 6),  
ITS controller/computers (73 in Fig. 6),  
URS signal processors (200 in Fig. 7),  
URS microcomputers (205 in Fig. 7),  
URS printers (221 in Fig. 7), and  
URS utilities meters (262 in Fig. 7).

... page 47 line 16 ... Execution segment information operates by invoking preprogrammed operating instructions that exist at each subscriber station apparatus that is addressed. ... [see controlled function]

For each appropriate addressed apparatus and controlled function combination a unique execution segment binary information value is assigned. ...

For any given command, the execution segment information of said command invokes, at each relevant subscriber station apparatus, the preprogrammed operating instructions uniquely associated with its particular binary value in particular comparing and matching fashions that are described [extensively.]

The determination of appropriate addressed apparatus and controlled function combinations takes into account the facts that different apparatus, at any given subscriber station, can be preprogrammed to interpret any given instance of execution segment information differently and that subscriber station apparatus can be preprogrammed to automatically alter execution segment information. ...

...

... page 49 line 16 ... In the preferred embodiment, at any given time the number of binary information bits in any given instance of execution segment information is a particular constant number. [see "X."]

## F

"field" ... page 50 line 28 ... see "meter-monitor field."

first combining synch command ... page 89 line 8 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

The first message is of the information associated with the first combining synch

command. [See page 23 line 35 through page 24 line 16 of the specification as well as "combining synch command" above.] Said first command has a "01" header, an execution segment, and a meter-monitor segment of six fields. Said command is followed by an information segment that contains said program instruction set, and said information segment is followed by an end of file signal. Said first command addresses URS microcomputers, 205, and causes said computers, 205, to load and run the program instruction set transmitted in the information segment. Each meter-monitor segment field of said command contains information that identifies one of the following:

- . the origin of said "Wall Street Week" transmission,
- . the subject matter of said "Wall Street Week" program,
- . the program unit of said program,
- . the day of said transmission within a particular one hundred year period,
- . the supplier of the program instruction set in the information segment following said first combining synch command, and
- . the format of said meter-monitor segment information.

## G

"guide commands ... page 267 line 26 ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the 1st-, 2nd-, and 3rd-old-program-message (#5) messages, the 2nd-new-program-message (#5), and the 1st-old-radio-program- message (#5) inform no station control apparatus of new programming transmissions because said commands are addressed to no apparatus; the execution segment of each is the aforementioned pseudo-command. (Hereinafter, each said signal is called a "transparent command" because no subscriber station control apparatus "sees" said signal.)

## H

"H" ... page 95 line 30 ... a particular preprogrammed constant number of the first converted bits of said binary information. Said constant number is the number of bits in a SPAM command header. (Hereinafter, said constant number is called "H".)

"H+X" ... page 127 line 13 ... At any given time, any given instance of "10" header message command information is of one constant binary length--the aforementioned header+exec constant length. (Hereinafter, said length is called "H+X" and is the sum of H plus X.)

"H+X+L" ... page 110 line 16 ... a particular preprogrammed constant number that is the sum of H plus X plus L to the x-bits information at said SPAM-length-info memory. (Hereinafter, said constant is called "H+X+L".)

header ... page 45 line 4 ... In simple preferred embodiments, at any given time the number of binary information bits in any given instance of header information is a particular constant number. In other words, every header contains the same number of bits. In the simplest preferred embodiment, said constant number is two, all headers consist of two bits binary information, and commands are identified by one of three binary headers:

10 - a command with an execution segment alone;

00 - a command with execution and meter-monitor segments; and

01 - a command with execution and meter-monitor segments that is followed by an information segment.

... page 54 line 12 ... In the simplest preferred embodiment, a fourth type of header is:

11 - an additional information segment transmission following a "01" header command and one or more information segments which additional segment is addressed to the same apparatus and invokes the same controlled functions as said "01" command.

## I

information segment ... page 53 line 33 ... Information segments follow commands and can be of any length. Program instruction sets, intermediate generation sets, other computer program information, and data (all of which are organized in a fashion or fashions well known in the art) are transmitted in information segments. An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art. Commands can execute such program information and cause compiling prior to execution.



"intermediate generation sets" ... page 42 line 8 ... (Hereinafter, instances of computer program information that cause intermediate transmission station apparatus to generate program instruction set information and/or command information are called "intermediate generation sets.") ... see also "program instruction set" ... "intermediate generation set" is also defined at page 356 line 13 as ... (Hereinafter, an instance of computer program instructions that cause a computer, at an intermediate transmission station, to generate information of a program instruction set is called an "intermediate generation set.")

"intermediate generation set of Q" ... page 359 line 9 ... (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)

"intermediate transmission stations" ... page 40 line 33 ... (Hereinafter, ... stations that receive and retransmit broadcast transmissions are called "intermediate transmission stations", ...

"interval," as in "interval Q" of unit Q ... page 355 line 26 ... When the aforementioned remote distribution station inputs information to computer, 73, via network, 98, regarding unit Q, said distribution station inputs information that Q is particular combined medium programming and instructs computer, 73, to commence particular program instruction set generation in a particular fashion at a particular time interval prior to the scheduled playing of Q. (Hereinafter, a particular instance of such a time period is called "interval," as in "interval Q" of unit Q.)

"invoking broadcast control" ... page 23 line 25 ... Operating in said preprogrammed fashion under control of said first set of instructions, microcomputer, 205, reaches a stage at which the subscriber can input information only under control of signals embedded in the broadcast transmission and can reassume control of microcomputer, 205, ... only by executing a system reset (or so-called "warm boot") which on an IBM PC is accomplished by ... (Hereinafter, this first set of instructions is called the "control invoking instructions," and the associated steps are called "invoking broadcast control".)

"ITS" ... page 45 line 25 ... refers to intermediate transmission station apparatus.

J

K

L

"L" ... page 103 line 4 ... a third preprogrammed constant number of next bits and record said bits at particular memory. Said third constant number is the particular number of bits in an

instance of SPAM meter-monitor format field length token information. (Hereinafter, said third constant number is called "L".)

"length token" ... page 52 line 5 ... each instance of a meter-monitor segment includes a format field that contains information that specifies the particular format of the meter-monitor segment of said instance. Within said field is a particular group of binary information bits (hereinafter, the "length token") that identifies the number of bits in a meter-monitor segment of said format. Each alternate length token has a unique binary information code. The number of information bits in each instance of a length token is the smallest number of bits capable of representing the binary value of the total number of meter-monitor segment bit length alternatives. And the unique code of each different alternative is within the range of binary numbers thus defined.

...

... page 53 line 20 ... In the preferred embodiment, the bits of the length token are the first bits in each meter-monitor segment. ...

## M

"message" ... page 59 line 24 ... All of the information transmitted with a given header is called a "message." Each header begins a message, and each message begins with a header. More specifically, a message consists of all the SPAM information, transmitted in a given transmission, from the first bit of one header to the last bit transmitted before the first bit of the next header.

A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.

"meter command" ... page 48 line 33 ... The preferred embodiment includes ... one command that is addressed to URS signal processors, 200, (hereinafter, the "meter command") but does not instruct said processors, 200, to perform any controlled function. [This command is ] always transmitted with meter-monitor segment data that receiver station apparatus automatically process and record. By transmitting ... meter command signals, transmission stations cause receiver station apparatus to record meter-monitor segment information without executing controlled functions. ... The meter command causes apparatus such as controller, 12, of Fig. 2D to transmit meter information to buffer/comparator, 14, without performing any controlled function.

"meter-monitor field" ... page 50 line 28 ... For each category of [meter information and/or monitor] information, a series of binary bits (hereinafter, a "field" or "meter-monitor field") exists in the meter-monitor segment to contain the [category] information.

meter-monitor segments ... page 44 line 26 ... contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described [in many places of the disclosure, especially examples #3, #4 and #5.

...

... page 49 line 27 ... Examples of categories of [meter information and/or monitor] information include:

- meter instructions that instruct subscriber station meter apparatus to record particular meter-monitor segment information and maintain meter records of said information;

- origins of transmissions (eg., network source stations, broadcast stations, cable head end stations);

- dates and times;

- unique identifier codes for each program unit (including commercials);

- codes that identify uniquely each combining in a given combined medium program unit; codes that identify the subject matter of a program unit;

- unique codes for programming (other than programming identified by program unit codes) whose use obligates users to make payments (eg., royalties and residuals); and

- unique codes that identify the sources and suppliers of computer data.

For each category of information, a series of binary bits (hereinafter, a "field" or "meter-monitor field") exists in the meter-monitor segment to contain the information. In any given category such as origins of transmissions, each distinct item such as each network source, broadcast, or cable head end station has a unique binary information code. In the preferred embodiment, the number of information bits in that category's meter-monitor field is the smallest number of bits capable of representing the binary value of the total number of distinct items. And the information code of each distinct item is within the range of binary numbers thus defined. In the preferred embodiment, date and time fields have sixteen bits.

Few commands require meter-monitor information of every information category. Often commands require no more than the identification codes of a specific combined medium program unit and of a specific combined medium combining within said program unit.

Because the amount of information in meter-monitor segments varies from command

to command, in the preferred embodiment more than one format exists at any given time for meter-monitor segment information. ...

Because the number of categories of meter-monitor information varies from one command to the next, the length of meter-monitor segments varies. ...

In the preferred embodiment, each instance of a meter-monitor segment includes a format field that contains information that specifies the particular format of the meter-monitor segment of said instance. Within said field is a particular group of binary information bits (hereinafter, the "length token") that identifies the number of bits in a meter-monitor segment of said format. ...

In the preferred embodiment, each distinct meter-monitor segment format (including each distinct field format) also has a unique binary information code. ...

...

In the preferred embodiment, the bits of the length token are the first bits in each meter-monitor segment. ...

"MMS" ... page 104 line 7 ... (Hereinafter, the exact number of bits in any given meter-monitor segment is called, "MMS".)

"MMS-L" ... page 103 line 29 ... (Hereinafter, the number of the particular selected bit-length-number alternative associated with any given length token is called "MMS-L" to signify that said number is L bits less than the number bits in the meter-monitor segment in which said length token occurs.)

"MOVE bit" ... page 64 line 1 ... see "EOFS bit"

## N

"normal transmission location" ... page 86 line 12 ... (Hereinafter, the preferred normal location for transmitting signals in any given communication medium is called, the "normal transmission location".)

"null outputs" ... page 159 line 10 ... Among such other outputs is one or more (hereinafter called, "null outputs") with capacity for accepting binary information and merely recording said information at particular memory associated with matrix switch, 39I, thereby overwriting and obliterating information previously recorded at said memory. The purpose of such a null output is to provide means whereby said switch can automatically cause information of any selected SPAM message to be discarded rather than transferred to addressed apparatus.

## O

"original transmission stations" ... page 40 line 31 ... (Hereinafter, stations that originate broadcast

transmissions are called "original transmission stations," ...

P

"padding bits" ... page 55 line 22 ... particular bits are added at the end of any command that is not already a multiple of the particular signal word bit length that applies in signal processor system communications at the subscriber stations to which said transmission is transmitted. (Hereinafter, said bits are called "padding bits.") Padding bits communicate no command information nor are padding bits part of any information segment. The sole purpose of padding bits is to render the information of any given SPAM command into a bit length that is, by itself, complete for signal processor system communication. Padding bits are added to command information prior to the transmission of said information at said station, and all subscriber station apparatus are preprogrammed to process padding bits. The particular number of padding bits that are added to any given command is the smallest number of bits required to render the bit length of said command into a multiple of said signal word bit length.

"pre-transmission evaluation" ... page 65 line 29 ... To prevent such erroneous processing, in the preferred embodiment, after the initial generation of any given instance of SPAM message information (not including end of file signal information) and before the embedding and transmitting of said instance, said information is transmitted through an apparatus, called an "EOFS valve," that detects end of file signals and is described below. If said valve detects in said information particular information that constitutes an end of file signal, before being embedded and transmitted, the binary information of said instance is rewritten, in a fashion well known in the art that may be manual, to cause substantively the same information processing at subscriber stations without containing an instance of information that is identical to the information of an end of file signal. (Hereinafter, such pre-transmission processing of a message is called a "pre-transmission evaluation.")

"program instruction set" ... page 24 line 16 ... a ... set of [processing] instructions [conveyed in the information segment of a SPAM message] that is loaded and run [at receiver station (including ITS) computing apparatus] ... [at page 42 line 2, the meaning of "program instruction sets" is further defined as ->] (Hereinafter, instances of computer program information that cause ultimate receiver station apparatus to generate and display user specific information are called "program instruction sets.") ... [see also "intermediate generation set"]

"program instruction set of Q" ... page 365 line 18 ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)

"program instruction set of Q.1" ... page 378 line 23 ... (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of

Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)

"program instruction set of Q.2" ... page 380 line 20 ... [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]

"program originating studio" ... page 20 line 29 ... (Hereinafter, a studio or station that originates the broadcast transmission of programming is called the "program originating studio.")

"program unit identification code" ... page 90 line 1 ... (Hereinafter, meter-monitor information that identifies the program unit of a given program may also be called the "program unit identification code".)

"programming" ... page 11 line 7 ... The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.

"pseudo command" ... page 48 line 31 ... The preferred embodiment includes one appropriate command (hereinafter called the "pseudo command") that is addressed to no apparatus ... [This command is] always transmitted with meter-monitor segment data that receiver station apparatus automatically process and record. By transmitting pseudo command ... signals, transmission stations cause receiver station apparatus to record meter-monitor segment information without executing controlled functions. The pseudo command enables a so-called ratings service to use the same system for gathering ratings on conventional programming transmissions that it uses for combined media without causing combined media apparatus to execute controlled functions at inappropriate times (eg., combine overlays onto displays of conventional television programming).

## Q

## R

"RAM" ... page 23 line 1 ... random access memory

"revoking broadcast control." ... page 513 line 25 ... the steps associated with returning a microcomputer, 205, from broadcast control to local control are called "revoking broadcast control."

"ROM" ... page 31 line 9 ... read only memory

S

second combining synch command ... page 89 line 3 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

...

... page 90 line 4 The second message is of the information associated with the second combining synch command. [See page 25 line 34 through page 26 line 8 of the specification as well as "combining synch command" above.] Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. Said second command causes said computers, 205, to combine the Fig. 1A information of each microcomputer, 205, with the information of Fig. 1B and transmit the combined information to monitors, 202M. Each meter-monitor segment field of the second command contains information of one of the following:

- . the subject matter of said "Wall Street Week" program,
- . the program unit of said program,
- . the unique code of said overlay given said program unit information,
- . the minute of said transmission within a particular one month period, and
- . the format of said meter-monitor segment information.

segment ... page 44 line 4 ... Fig. 2E shows one example of the composition of signal information (excluding bit information required for error detection and correction). The information in Fig. 2E commences with a header which is particular binary information that synchronizes all subscriber station apparatus in the analysis of the information pattern that follows. Following said header are three segments: an execution segment, a meter-monitor segment, and an information segment. As Fig. 2E shows, the header and execution and meter-monitor segments constitute a command.

"signal processor" ... page 15 line 8 ... signal processing apparatus defined at page 15, line 8.

"signal processor alternative #1" ... page 34 line 1 ... For certain applications, one particular embodiment (hereinafter, "signal processor alternative #1") can be configured to receive only other inputs at buffer/comparator, 8, in which case said embodiment has no oscillator, 6; switch, 1; mixers, 2 and 3; or decoders, 30 or 40.

"signal processor alternative #2" ... page 34 line 6 ... For other particular applications, another

particular embodiment (hereinafter, "signal processor alternative #2") can be configured to receive only inputs at buffer/comparator, 14, in which case said embodiment has only buffer/comparator, 14; recorder, 16; clock, 18; and the control device apparatus associated with controller, 20.

"signal records" ... page 31 line 34 ... Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records")

"signal unit" ... page 14 line 26 ... (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the proper use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission. The term "signal word" hereinafter means ...

"signal word" ... page 14 line 32 ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)

signals ... page 40 line 17 ... The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations.

...  
SPAM signals control and coordinate a wide variety of subscriber stations. Said stations include ... "local affiliate" broadcast stations that receive and retransmit single network transmissions; ... "cable system headends" that receive and retransmit multiple network and local broadcast station transmissions; and ... "media centers" in homes, offices, theaters, etc. where subscribers view programming.

...  
... page 43 line 32 ... SPAM signals contain binary information of the sort well known in the art including bit information required for error correction using forward error correction techniques, well known in the art, in point to multi-point communications; request retransmission techniques, well known in the art, in point to point communications; and/or other error correction techniques, as appropriate.

Fig. 2E shows one example of the composition of signal information (excluding bit information required for error detection and correction). The information in Fig. 2E commences with a header which is particular binary information that synchronizes all subscriber station apparatus in the analysis of the information pattern that follows.



Following said header are three segments: an execution segment, a meter-monitor segment, and an information segment. As Fig. 2E shows, the header and execution and meter-monitor segments constitute a command.

"SPAM" ... page 40 line 21 ... (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)

"specified condition commands" ... page 44 line 33 ... Particular commands (called, hereinafter, "specified condition commands") always contain meter-monitor segments. Said commands cause addressed apparatus to perform controlled functions only when specified conditions exist, and meter-monitor information of said commands specifies the conditions that must exist.

"standard control-invoking value" ... page 285 line 7 ... see "covert control-invoking value"

## T

third combining synch command ... page 89 line 3 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

...  
... page 90 line 28 The third message is of the information associated with the third combining synch command. [See page 26 line 33 through page 27 line 7 of the specification as well as "combining synch command" above.] Said third command has only a "10" header and an execution segment and addresses URS microcomputers, 205. Said command causes said computers, 205, to cease combining and transmit only the received composite video transmission to monitors, 202M, and to continue processing in a predetermined fashion (which fashion may be determined by the aforementioned program instruction set).

"transparent commands ... page 267 line 34 ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the 1st-, 2nd-, and 3rd-old-program-message (#5) messages, the 2nd-new-program-message (#5), and the 1st-old-radio-program- message (#5) inform no station control apparatus of new programming transmissions because said commands are addressed to no apparatus; the execution segment of each is the aforementioned pseudo-command. (Hereinafter, each said signal is called a "transparent command" because no subscriber station control apparatus "sees" said signal.)

## U

"ultimate receiver stations" ... page 40 line 31, page 40 line 33, and page 40 line 35 ... (Hereinafter, ... stations where subscribers view programming are called "ultimate receiver stations.")

"URS" ... page 45 line 26 ... refers to ultimate receiver station apparatus.

## V

## W

"w-bits information" ... page 103 line 29 ... Said match causes SPAM-controller, 205C, to place particular preprogrammed bit-length-number information at said SPAM-length-info-@205 memory. (Said particular bit-length-number information is called, hereinafter, "w-bits information".) Said information is the precise number of bits, following the last of said L bits, that remain in the meter-monitor segment of the command associated with said length token. Said number is not a preprogrammed constant value such as H, X, and L that is the same for every SPAM command with a meter-monitor segment. Rather, said number is a variable that may differ from one SPAM meter-monitor segment to the next. More precisely, it is, for any given meter-monitor segment, a selected one of several preprogrammed bit-length-number information alternatives.

"W-token information" ... page 103 line 15 ... Automatically SPAM-controller, 205C, compares the information at said SPAM-length-info-@205 memory with preprogrammed token-comparison-@205 information and determines that said information at memory matches particular token-comparison-@205 information (which particular information is called, hereinafter, "W-token information").

"wireless" ... page 248 line 21 ... over-the-air (hereinafter, "wireless")

## X

"X" ... page 96 line 11 ... a second preprogrammed constant number of next bits and record said bits, in their order after conversion, at particular SPAM-exec register memory. Said second constant number is the particular number of bits in a SPAM execution segment. (Hereinafter, said second constant number is called "X".)

Y

Z

## MESSAGES DEFINED IN SPECIFIC EXAMPLES

### EXAMPLE #1

### EXAMPLE #2

"2nd meter information (#2)" ... page 152 line 34 ...

### EXAMPLE #3

"1st monitor information (#3)" ... page 174 line 21 ...

"2nd monitor information (#3)" ... page 190 line 14 ...

### EXAMPLE #4

"1st meter-monitor information (#4)" ... page 213 line 32 ...

"2nd meter-monitor information--second precondition failed--(#4)." ... page 238 line 16 ...

"2nd meter-monitor information (#4)." ... page 239 line 3 ...

"2nd monitor information (#4)" ... page 240 line 40 ...

### EXAMPLE #5

1st command (#5) ... page 251 line 17 ...

"1st-old-program-command (#5)" ... page 252 line 13 ...

"1st-new-program-message (#5)" ... page 253 line 1 ...

"2nd command (#5)" ... page 256 line 5 ...  
"2nd-old-program-message (#5)" ... page 256 line 27 ...  
"2nd-new-program-message (#5)" ... page 257 line 5 ...  
"3rd command (#5)." ... page 259 line 25 ...  
"3rd-old-program-message (#5)" ... page 260 line 12 ...  
"3rd-new- program-message (#5)" ... page 260 line 29 ...  
"4th command (#5)" ... page 263 line 5 ...  
"1st-old-radio-program-message (#5)" ... page 264 line 28 ...  
"1st-new-radio-program-message (#5)" ... page 265 line 9 ...

#### **EXAMPLE #6**

"1st supplementary message (#6)" ... page 281 line 35 ...  
"2nd supplementary message (#6)" ... page 281 line 35 ...

#### **EXAMPLE #7**

please-fully-enable-WSW-on-CC13-at-particular-8:30 information ... page 289 line 28 ...  
"local-cable-enabling-message (#7)" ... page 291 line 19 ...  
"1st-WSW-program-enabling-message (#7)" ... page 297 line 23 ...  
"1st- WSW-decryption-check (#7)" ... page 300 line 15 ...  
"2nd-WSW-program-enabling-message (#7)" ... page 304 line 10 ...  
"2nd-WSW-decryption-check (#7)" ... page 308 line 5 ...  
Prepare-To-Retransmit-WSW message ... page 430 line 35 ...  
Select-WSW-Program-Unit SPAM message ... page 435 line 19 ...

### **EXAMPLE #8**

"first- network-cue-to-transmit-locally message (#8)" ... page 335 line 30 ...

"first-network-cue-to-transmit-network message (#8)" ... page 335 line 35 ...

"select-A-message (#8)," the "select-B-message (#8)," the "select-C-message (#8)," and so forth up to the "select-Z- message (#8)," each message referring to the corresponding program unit: A, B, C, and so forth up to Z, respectively, and said messages are called collectively the "cue-to-select messages (#8)." ... page 342 line 14 ...

### **EXAMPLE #9**

"generate-set-information message (#9)" ... page 359 line 3 ...

"first cueing message (#9)" ... page 366 line 27 ...

"align-URS- microcomputers-205 message (#9)" .. Page 368 line 6 ...

"synch-SPAM-reception message (#9)" ... page 368 line 19 ...

"control-invoking message (#9)" ... page 368 line 30 ...

"transmit-data-module-set message (#9)" ... page 369 line 22 ...

"data-module-set message (#9)" ... page 369 line 30 ...

"transmit-and-execute-program-instruction-set message (#9)" ... page 371 line 9 ...

"program-instruction-set message (#9)" ... page 371 line 17 ...

"cease-stripping-and-embedding message (#9)" ... page 372 line 13 ...

"1st commence-outputting message (#9)" ...page 372 line 25 ...

"2nd commence-outputting message (#9)" ... page 372 line 26 ...

"3rd commence-outputting message (#9)" ... page 372 line 27 ...

"1st cease-outputting message (#9)" ... page 372 line 27 ...

"4th commence-outputting message (#9)" ... page 372 line 28 ...  
"5th commence-outputting message (#9)" ... page 372 line 29 ...  
"6th commence-outputting message (#9)" ... page 372 line 30 ...  
"2nd cease-outputting message (#9)" ... page 372 line 30 ...  
"second cueing message (#9)" ... page 373 line 5 ...  
"disband-URS- microcomputers-205 message (#9)" ... page 373 line 22 ...

#### **EXAMPLE #10**

"generate-set-information message (#10)" ... page 377 line 34 ...  
"load-set-information message (#10)" ... page 381 line 23 ...  
"align-URS-microcomputers-205 message (#10)" ... page 382 line 26 ...  
"synch- SPAM-reception message (#10)" ... page 383 line 4 ...  
"control-invoking message (#10)" ... page 383 line 13 ...  
"transmit-data-module-set message (#10)" ... page 383 line 24 ...  
"transmit-and-execute-program-instruction-set message (#10)" ... page 385 line 7 ...  
"program-instruction-set message (#10)" ... page 385 line 14 ...  
"cease-stripping-and-embedding message (#10)" ... page 387 line 9 ...  
"1st commence-outputting message (#10)" ... page 387 line 25 ...  
"2nd commence-outputting message (#10)" ... page 387 line 26 ...  
"3rd commence-outputting message (#10)" ... page 387 line 26 ...  
"1st cease-outputting message (#10)" ... page 387 line 27 ...  
"4th commence-outputting message (#10)" ... page 387 line 28 ...

"5th commence-outputting message (#10)" ... page 387 line 29 ...

"6th commence-outputting message (#10)" ... page 387 line 29 ...

"2nd cease-outputting message (#10)" ... page 387 line 30 ...

"disband-URS-microcomputers-205 message (#10)" ... page 387 line 34 ...

"local-output-cueing message (#10)" ... page 388 line 7 ...

#### **EXAMPLE #11**

first-master-cueing message (#11) ... page 545 line 32 ...

first-national-cueing message (#11) ... page 546 line 3 ...

second-master-cueing message (#11) ... page 546 line 33 ...

transmit-program-instruction-set SPAM message (#11) ... page 547 line 17 ...

local-second-cueing message (#11) ... page 552 line 12 ...

second-cueing message (#11) ... page 554 line 22 ...